

# REMEDIAL SITE ASSESSMENT DECISION - EPA REGION IV

Page 1 of 1

EPA ID: ALSFN0407038 Site Name: EAST GADSDEN DEVELOPMENT PROJECT

State ID:

Alias Site Names:

City: GADSDEN

County or Parish: ETOWAH

State: AL

69469

Refer to Report Dated:

Report Type: PRELIMINARY ASSESSMENT 001

Report Developed by: STATE

## DECISION:

☒ 1. Further Remedial Site Assessment under CERCLA (Superfund) is not required because:

☒ 1a. Site does not qualify for further remedial site assessment under CERCLA (No Further Remedial Action Planned - NFRAP)

☐ 1b. Site may qualify for action, but is deferred to:

☐ 2. Further Assessment Needed Under CERCLA:

2a. Priority: ☐ Higher ☐ Lower

2b. Other: (recommended action) NFRAP (No Further Remedial Action Planned)

## DISCUSSION/RATIONALE:

Some documented groundwater contamination. No public groundwater wells within 4 mile radius. No surface water intakes within 15 mile downstream target range. Construction plans include backfilling the site (5 - 15 feet) and paving over fill.

Site Decision Made by: ANNIE M. GODFREY

Signature:

Annie M. Godfrey

Date: 06/12/2000

SITE: \_\_\_\_\_  
PAGE: 18  
OTHER: Vol. 1

FROM:

**ADEM**



ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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CERCLA PRELIMINARY ASSESSMENT  
ON  
EAST GADSDEN DEVELOPMENT SITE  
ETOWAH COUNTY  
GADSDEN, ALABAMA

ADEM FORM 194 7/99

1.8  
OTHER: VOL. 1

**PRELIMINARY ASSESSMENT**  
**ON**  
**EAST GADSDEN DEVELOPMENT PROJECT**  
**ETOWAH COUNTY**  
**GADSDEN, ALABAMA**



Prepared by:

Kenneth L. Prestridge

Site Assessment Unit  
Hazardous Waste Branch  
Alabama Department of  
Environmental Management

May 19, 2000

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**Date: May 19, 2000**

**Prepared by: Kenneth L. Prestridge  
Site Assessment Unit**

**Site: East Gadsden Development Project  
Broad Street and Hood Avenue  
Gadsden, Alabama 35902  
Etowah County**

**EPA ID No.: ALD XXXXXXXXXX**

**Ref #: XXXX**

## **1. INTRODUCTION**

Under authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA) and a cooperative agreement between the U.S. Environmental Protection Agency and the Alabama Department of Environmental Management (ADEM), a Preliminary Assessment (PA) was conducted at the East Gadsden Development Project Site in Gadsden, Alabama. The purpose of this investigation was to collect information concerning conditions at the site sufficient to assess the threat posed to human health and the environment and to determine the need for additional investigation under CERCLA/SARA or other action. The scope of the investigation included review of available file information, a site reconnaissance, and a comprehensive target survey.

## **2. SITE DESCRIPTION, OPERATIONAL HISTORY, AND WASTE CHARACTERISTICS**

### **2.1 Location**

The East Gadsden Development Project Site is located in Etowah County in the town of Gadsden, Alabama -- Township 12 South, Range 6 East; Section 10, NW¼, NW¼; at 34° 00' 31.38" North Latitude and 85° 59' 46.56" West Longitude (See Attachment 1, Reference 6 and 9). The site can be found by traveling northward from Montgomery on Interstate 65 until you reach Interstate 59 in Birmingham, AL. Exit I 65 North and turn east on I 59 North. Continue northeast on I 59 until you reach Gadsden, AL. Exit I 59 at exit 183, Forrest Avenue, and turn east (right). Proceed along Forrest Avenue for approximately 3.8 miles to where it turns into Broad Street. Proceed along Broad Street for one mile to where it intersects Hood Avenue. The site will be located on the southwest corner of Hood Avenue and Broad Street (Reference 2, and 6).

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The site consists of mostly undeveloped property with a pond and boat landing/slew located on the property. The rest of the property consists of paved parking lot area attached to the K Mart located just south of the property (Reference 2 and 6).

The climate of Etowah County is characterized by long, hot, humid summers and short mild winters with an average annual daily temperature is 67°F. The average temperature during the summer is 80.3°F, and the average winter temperature is 52°F. Maximum yearly temperatures exceed 100°F and minimum yearly temperatures may be less than 0°F. The average annual rainfall is 56 inches (Reference 1 and 3).

## **2.2. Site Description**

The site is a 6.34 acre wooded lot located in East Gadsden, AL. The site is in an urban/commercial area with light industry and commercial concerns surrounding the property. The site is set for redevelopment by the city of Gadsden. Heavy wooded land comprises the western portion of the site and grassed and paved land comprises the eastern portion of the site. A slew and pond are located in the north and western portion of the site. There are no structures on the site. A part of the southern portion of the site has been paved and is being used as part of the parking lot of the K Mart located to the south of the property. Parts of the site have been historically occupied by a used car lot; an auto painting facility; a gas station; a clay pipe manufacturing facility; and a railway spur line to a lumber company located at the site of the K Mart shopping center (Reference 13, 14 and 17). The site is bound by the Coosa River to the west, Broad Street to the north, Hood Avenue to the east, and the K Mart shopping center parking lot to the south (Reference 2 and 6). The City of Gadsden is working with the Ford dealership to build a new car dealership facility at this site. The present plans call for draining the pond, dredging the pond bottom, then backfilling and building the site up to the level of Hood Avenue (Reference 2, 15 and 16). After building the site up (approximately 5 to 15 foot of fill material throughout the site), the facility buildings would be constructed (Reference 15 and 16). There is presently no fence around the site. Minimal contact would be expected by the general public; although, workers or trespassers could have access to the site (Reference 2 and 6).

## **2.3 Operational History and Waste Characteristics**

### **2.3.1 Operational History:**

East Gadsden Development Project has been used for a variety of uses. Some of the historical uses are as follows: 1910 a railroad spur line crossed the property serving a lumber mill to the south of the property; 1937 a clay pipe manufacturing facility was located in the west portion of the property; 1943 a used auto sales and auto painting facility was located on the eastern portion of the site with a house and outbuilding on the western portion of the site; 1958 Bradberry's Service Station was located at the corner of Hood Avenue and Broad Street (there was also a gas

station and cleaners located to the northeast of this corner); 1969 the entire property was clear cut and a slew and pond were trenched. The slew was joined to the adjacent Coosa River and used as a private dock and boat landing. Mr. Rex Keeling is the property owner (Reference 13, 14, 16, and 17).

### **2.3.2 Waste Characteristics:**

There are no records of historical waste practices or disposals of the various businesses which were located on or around the site. A limited Phase II assessment was performed on the site by CORE Engineering which found the following: Geotechnical probe on site found evidence of an unidentified black slag buried on site (concentrated mostly on the western portion of the site); burnt timber was buried on site from the time of the site being clear cut; soil samples indicated some metals contamination and some Semi-volatiles contamination in some soil borings (further discussion will be taken up in the Soil pathway, paragraph 5.2); in addition, water samples taken on site indicated the presence of some contaminants (See paragraph 3.2). To supplement the Phase II assessment, ADEM personnel went to the site and performed X-ray Florescence analysis at 22 locations throughout the site to assess possible surficial contamination (Reference 2). Presently the site is made up of a partially overgrown wooded area, part of Kmart's parking lot, and a small fish pond (Reference 2 and 6). Plans for the future use of the property include dredging and backfilling the pond, raising the surface of the property up to the level of Hood Avenue, and constructing a car dealership on the site (Reference 2, 15 and 16).

## **3. GROUND WATER PATHWAY**

### **3.1 Hydrogeologic Setting**

The Site is situated in central Etowah County in what is considered to be the Coosa Valley District of the Alabama Valley and Ridge physiographic section. The topography of Etowah County is controlled by the geology and is characterized by narrow linear ridges and wide valleys. The surface elevations of the valley floor in the Coosa Valley District typically range from 500 to 600 feet above mean sea level (MSL). The surface elevation at the sites is approximately 520 feet MSL (Reference 1 and 4).

The Soil Conservation Service (SCS) classifies soils at the site as Holston – Urban Land complex, 2 to 15 percent slopes. The soils in this classification are described by the SCS as areas of gently sloping to moderately steep, well drained Holston soils and areas of urban land (Reference 1 and 4).

Holston soils make-up 40 to 60 percent of this map unit and consist of yellowish-brown fine sandy loam, loam, or sandy clay loam; yellowish-brown silty clay loam; and mottled yellowish-brown to strong brown and red silty clay loam. The permeability of the Holston soils is

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moderate with the permeability of the unsaturated zone at  $4.2 \times 10^{-4}$  to  $1.4 \times 10^{-3}$  cm/sec. (Reference 1 and 4).

Urban land make-up 20 to 40 percent of this map unit and consist of areas that have been altered to an extent that identification is not possible. It includes areas covered by buildings, sidewalks, streets, and areas disturbed by grading, cutting, and filling (Reference 1 and 4).

Geologic units in Etowah County are sedimentary in origin and range in age from Cambrian to Pennsylvanian. Quaternary alluvial deposits of the ancestral Coosa River also occur in Etowah County. The northwestern portion of the county is within the Appalachian Plateau physiographic province, and consists of broad synclinal mountains separated by folded and faulted anticlinal valleys. The southeastern portion of the county is within the Valley and Ridge physiographic province, and consists of a series of folded overlapping imbricate thrust sheets (Reference 1 and 4).

The site is located within the outcrop area of the Quaternary age alluvial and low terrace deposits. The alluvial and low terrace deposits range in thickness from 0 to 70 feet in Etowah County, and are composed of medium to coarse grained gravel with a sandy matrix and a fine to medium grained sand with interbedded lens of gravel and clay. The alluvial deposits in central Etowah County overlie the Conasauga Formation, which is composed of thin bedded, dark-gray, fine-grained limestone interbedded with thin fissile shale (Reference 1 and 4).

The Gadsden Fault traverses approximately 0.75 miles to the north of the site. The Gadsden Fault is a thrust fault and generally trends from the west to the east. The structural features in the vicinity of the site should enhance the fractured nature of the bedrock. The site is located in an area that is susceptible to karst formation (Reference 1 and 4).

The site is located within the recharge area for the Watercourse aquifer, and in the outcrop area of the Quaternary alluvial and low terrace deposits. Groundwater in this formation occurs under unconfined conditions and typically yields small quantities to wells. The Watercourse aquifer is hydraulically interconnected with the underlying Conasauga Formation. Groundwater in this formation occurs in interconnected solution channels, and potentially large amounts of water can be obtained from these features. Depth to groundwater at the site is expected to be between less than 25 feet (Reference 1 and 4).

### **3.2 Groundwater Targets**

There are no active public water supply wells located within 4 miles of the site (Reference 1 and 5). The closest active public water supply well is operated by Glencoe Water Works Board, and is located approximately 5.5 miles to the southeast of the site (Reference 1 and 5). The site is not in a designated wellhead protection area, and no wellhead protection areas are located within four miles of the site. Due to the urban nature of the site private water supply wells are not expected in the immediate vicinity of the site (Reference 1).



Analysis of groundwater monitoring wells performed by CORE, Inc. (consultants for the City of Gadsden), indicated Barium at 0.079 mg/L, Tetrachloroethene at 14.2 ug/L, Trichloroethene at 3.67 ug/L present in monitoring well # 2, and Barium at 0.045 mg/L present in monitoring well# 3 (Reference 14).

### **3.3. Ground Water Conclusions**

The Town of Gadsden obtains 100 percent of its drinking water from a surface water intake located approximately ½ mile upstream of this site. There are no known public drinking water wells within the 4-mile target distance radius. The closest municipal well is operated by Glencoe Water Works Board, and is located approximately 5.5 miles to the southeast of the site. Private wells were not observed at residences near the site. Extent of private well usage within the 4-mile distance radius is not well documented, but the urban character of the area suggests private wells are probably not used. Possibly drinking water private wells are not suspected. There is analytical evidence to indicate contaminants have impacted groundwater at this site. Further evaluation of groundwater conditions may be contemplated and recommended at the State level.

## **4. SURFACE WATER PATHWAY**

### **4.1 Hydrologic Setting**

The Site is situated in central Etowah County in what is considered to be the Coosa Valley District of the Alabama Valley and Ridge physiographic section. The topography of Etowah County is controlled by the geology and is characterized by narrow linear ridges and wide valleys. The surface elevations of the valley floor in the Coosa Valley District typically range from 500 to 600 feet above mean sea level (MSL). The surface elevation at the sites is approximately 520 feet MSL (Reference 1 and 6).

The climate of Etowah County is characterized as humid subtropical with hot summers and mild winters. The average annual temperature is approximately 61° with the average temperature in the in the summer is 78° and in the winter is 44°. The average annual rainfall is approximately 54 inches. Approximately 21 inches of the 54 inches of rain per year runs off into the streams (Reference 1 and 3).

The Soil Conservation Service (SCS) classifies soils at the site as Holston – Urban Land complex, 2 to 15 percent slopes. The soils in this classification are described by the SCS as areas of gently sloping to moderately steep, well drained Holston soils and areas of urban land (Reference 1 and 4).

Holston soils make-up 40 to 60 percent of this map unit and consist of yellowish-brown fine sandy loam, loam, or sandy clay loam; yellowish-brown silty clay loam; and mottled yellowish-

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brown to strong brown and red silty clay loam. The permeability of the Holston soils is moderate with the permeability of the unsaturated zone at  $4.2 \times 10^{-4}$  to  $1.4 \times 10^{-3}$  cm/sec (Reference 1 and 4).

Surface water drainage from the site appears to be to the west into the Coosa River. The Coosa River makes-up the entire 15-mile surface water pathway from the site and is listed in the ADEM Admin. Code R. 335-6-11-.02 with a use classification of fish and wildlife (Reference 7). The Coosa River in the vicinity of Gadsden has a seven day ten year low flow rate of 1,360 cfs and a seven day two year low flow rate of 1,830 cfs (Reference 1 and 12). No known surface water intakes for public drinking water supplies are located along the 15-mile surface water pathway from the site (Reference 1 and 6). Probable point of entry for anything washing off the site would be the dredged slew located on site or directly into the Coosa River (Reference 2 and 6). The area of the site is located within the 100-year floodplain, but the planned construction will elevate the surface out of the 100-year floodplain (Reference 10, 15 and 16).

#### **4.2 Surface Water Targets**

There are no known municipal surface water intakes within the 15-mile target distance limit downstream from this site (Reference 1 and 6). There is a surface water intake for the City of Gadsden located approximately 1 mile upstream from the site, but it would not be impacted from surface water runoff from this site (Reference 1, 5 and 6). Surface water drainage from the site appears to be to the west into the Coosa River which makes up the entire 15-mile surface water target distance limit pathway. The Coosa River is listed in the ADEM Admin. Code R. 335-6-11-.02 with a use classification of fish and wildlife (Reference 7). Flow data for the Coosa River near Gadsden, Alabama is as follows (Reference 12):

<b>Station number</b>	<b>7-day, 2-year low flow</b>	<b>7-day, 10-year low flow</b>
02400500	1,830 ft <sup>3</sup> /sec	1,360 ft <sup>3</sup> /sec

Station # 02400500 is located at latitude 34°00'37", longitude 85° 13'34"; in the NW ¼ of Section 10, Township 12 South, Range 6 East, in Etowah County, Hydrologic Unit 03150106 on Forrest Avenue in Gadsden 1.5 miles upstream from Big Wills Creek at mile 174.8.

There are four (4) Federally Listed Species designated by the U.S. Fish and Wildlife Service as either Endangered, Threatened, or a Candidate for Listing (Reference 11) either known or possibly present in the area. The following species are known or possibly found in the area of concern:

<b>Species</b>	<b>Occurrence</b>	<b>Group</b>	<b>Status</b>
<b>1. Indiana Bat</b>	<b>Possible</b>	<b>Mammal</b>	<b>Endangered</b>
<b>2. Mohr's Bargar's Buttons</b>	<b>Known</b>	<b>Plant</b>	<b>Threatened</b>

<b>Species</b>	<b>Occurrence</b>	<b>Group</b>	<b>Status</b>
<b>3. Green Picture Plant</b>	<b>Known</b>	<b>Plant</b>	<b>Endangered</b>
<b>4. Flattened Musk Turtle</b>	<b>Known</b>	<b>Reptile</b>	<b>Threatened</b>

There are no wetlands along the surface water pathway from the site down the 15-mile surface water pathway along the Coosa River (Reference 6).

#### **4.3. Surface Water Conclusions**

There is no analytical data to indicate contamination has impacted the Coosa River from this site. There are no surface water drinking water intakes within the 15-mile downstream distance. The Coosa River is classified as Fish/Wildlife usage. The nearest fishery would be the Coosa River. The Coosa River in the vicinity of Gadsden has a seven day ten year low flow rate of 1,360 cfs and a seven day two year low flow rate of 1,830 cfs. There are 4 endangered or threatened species listed as being present in Etowah County. The site is within the 100-year floodplain with proposed construction to elevate the surface above the 100-year floodplain and there are no wetlands within the 15-mile distance limit.

### **5. Soil Exposure and Air Pathways**

#### **5.1. Physical Conditions**

The site is a 6.34 acre wooded lot located in East Gadsden, AL. The site is in an urban/commercial area with light industry and commercial concerns surrounding the property. The site is set for redevelopment by the city of Gadsden. Heavy wooded land comprises the western portion of the site and grassed and paved land comprises the eastern portion of the site. A slew and pond are located in the north and western portion of the site. There are presently no structures on the site. A part of the southern portion of the site has been paved and is being used as part of the parking lot of the K Mart located to the south of the property. Parts of the site have been historically occupied by a used car lot; an auto painting facility; a gas station; a clay pipe manufacturing facility; and a railway spur line to a lumber company located at the site of the K Mart shopping center (Reference 13, 14, and 16). The site is bound by the Coosa River to the west, Broad Street to the north, Hood Avenue to the east, and the K Mart shopping center parking lot to the south (Reference 2 and 6).

The City of Gadsden is working with the Ford dealership to build a new car dealership facility at this site. The present plans call for draining the pond, dredging the pond bottom, then backfilling and building the site up to the level of Hood Avenue (Reference 2, 15 and 16). After building the site up (approximately 5 to 15 foot of fill material throughout the site), the facility buildings would be constructed (Reference 15 and 16). There is presently no fence around the site.

Minimal contact would be expected by the general public; although, workers or trespassers could have access to the site (Reference 2 and 6).

## **5.2. Soil and Air Targets**

The total population within the four-mile radius is approximately 40,552. The following chart shows how the population is distributed (Reference 2, 6, and 8).

<b>RADIUS (in Miles)</b>	<b>RESIDENCES (per radius)</b>	<b>POPULATION (total)</b>	<b>RADIUS AVG (per household)</b>	<b>COUNTY AVG (per household)</b>
3-4	4,399	11,085	2.52	2.55
2-3	4,501	11,339	2.52	2.55
1-2	5,736	13,906	2.42	2.55
1/2-1	1,520	3,158	2.08	2.55
1/4-1/2	423	794	1.88	2.55
0-1/4	139	270	1.94	2.55

County average is based on the 1990 Census figures for Etowah County only (Reference 8). There are 19 schools within the four-mile distance radius from the site (Reference 2 and 6). The site is located in a urban/commercial area at the intersection of Hood Avenue and Broad Street in Gadsden, Alabama (population within 4-mile radius - 40,552). The nearest residence is located less than ¼ mile to the southeast of the site (Reference 2 and 6).

Soil sample results from Core Inc., indicated some lead concentrations of 422 mg/kg and 571 mg/kg in boring B3 (5 – 7' and 10 – 12' levels respectively). In addition, Anthracene (24.6 mg/kg), Chrysene (10.4 mg/kg), and Benzene (0.143 mg/kg) were found in boring B-3 at the 5 – 7' level and Anthracene (12.7 mg/kg), and Benzene (0.135 mg/kg) were found at the 10 – 12' level (Reference 14). Other VOCs and SVOCs were detected in other soil samples, but were under action levels (see attachment 11 for analysis sheets) (Reference 13 and 14).

Due to the presence of lead in subsurface samples, ADEM personnel performed XRF site screening analysis at 21 locations on site to screen surficial soils in situ on 4 Nov 99, to look for possible hot spots and, if found, to delineate the extent of highly contaminated areas (Reference 2). Analysis indicated no sample locations had lead levels exceeding 142 ppm (Reference 2). No other constituents (ie. Arsenic or chromium) exceeded risk based concentration limits for industrial settings as established for Region 3 (Reference 18).

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This site is not an active facility and no air releases were evident from any source (Reference 2). The city has plans to dredge the pond, backfill it, raise the level of approximately  $\frac{3}{4}$  of the site to the level of Hood Avenue (Reference 2, 15 and 16).

**5.3. Soil Exposure and Air Pathway Conclusions**

An air release has not been observed. A soil release is possible due to the past practices at the site. Analytical evidence suggest some contamination of SVOCs and VOCs (ie. Anthracene, Benzene, and Chrysene) at depth and some metals contamination (ie. Lead) at depth. No analytical evidence suggests surficial contamination. Total population within four miles is approximately 40,522. The nearest residence is located approximately  $\frac{1}{4}$  mile to the southeast of the site. There is no fence around the site. There are 19 schools located within 4 miles of the facility. The site is scheduled to have 5 to 15 foot of fill material brought in to raise the level of the site to the level of Hood Avenue.

**6. Summary and Conclusions**

There are no public groundwater wells in use for public water supply within the four-mile radius. The municipal water for this area is supplied by surface water with the intake located approximately 1 mile upstream of the site on the Coosa River. The nearest municipal drinking water well is located 5.5 miles to the southeast in the town of Glencoe, Alabama. Privately owned well usage in this area is not adequately documented but due to the urban nature of the area is unlikely. There are no surface water intakes along the fifteen-mile downstream target distance limit. There is some documented groundwater contamination present and 4 monitoring wells on site. The area is susceptible to contamination from the surface due to moderate permeability of the soils, high precipitation, and low rate of run-off of rainwater. There are no wetlands along the surface water pathway, and four endangered species may be present within the 4-mile distance radius. The area of the site is located within the 100-year floodplain area. Air releases were not evident at the site and soil contamination is possible due to past practices at the site. Also, analytical evidence suggests soil contamination at depth. Total population within four miles is approximately 40,552. The nearest residence is located to the southeast. There is no fence around the site. There are 19 schools located within 4 miles of the facility. Construction plans include the proposed backfilling of the site (from 5 – 15 feet), and to pave over the fill material and build a car lot over the facility. Since the site contamination does not pose a direct contact risk, have the potential for surface runoff, or appear to impact significant target populations, we recommend that the East Gadsden Development Project Site be considered for no further action or evaluation under CERCLA.

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### REFERENCES

1. Gibson, Joseph L., *Alabama Department of Environmental Management, Groundwater Branch, Hydrogeology PA on East Gadsden Development Project Site*, 22 February 2000.
2. Prestridge, Kenneth L., *Alabama Department of Environmental Management, Site Assessment Unit, Site Assessment Unit*, Observations made during site visit, 4 November 1999.
3. *Climatic Atlas of the United States*, *US Department of Commerce Environmental Science Services Administration*, June 1968, Reprinted 1983 by **National Oceanic and Atmospheric Administration**.
4. Bossong, C. R., Geohydrology and Susceptibility of Major Aquifers to Surface Contamination In Alabama; Area 2; Water-Resources Investigations Report 88-4177; Prepared by *U.S. Geological Survey in cooperation with the Alabama Department of Environmental Management*; 1989
5. Federal Reporting Data System (FRDS) II, Water Supply Information
6. U.S.G.S. 7.5 Minute Series Topographic Quadrangle Maps of Alabama: Ballplay, Covin Gap, Dunaway Mountain, Gadsden East, Gadsden West, Glencoe, Howelton, Steele. Scale 1:24,000.
7. *Alabama Department of Environmental Management, Water Division Water Use Classifications for Interstate and Intrastate Waters*, May 1997.
8. *Alabama State Data Center, Center for Business and Economic Research, College of Commerce and Business Administration, **The University of Alabama**. 1990 CENSUS Alabama Counties and Cities By Race.*
9. Trimble Navigation Limited Survey and Mapping Division, GPS Pathfinder GeoExplorer II and Pathfinder Office Version 1.10, October 1997.
10. *Federal Emergency Management Agency, Flood Insurance Rate Map*, Etowah County, Alabama, Unincorporated Areas. Panel Number 010080 0020C, Effective Date: April 4, 1983.
11. *U.S. Fish and Wildlife Service. "Alabama County Species List: Federally Endangered Species By County - April 1994"*
12. Atkins, J. B., and Pearman, J. L.; Low-Flow and Flow-Duration Characteristics of Alabama Streams; U.S. Geologic Survey, Water-Resources Investigations Report 93-4186;

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**REFERENCES (Cont.)**

Prepared in cooperation with the *Alabama Department of Environmental Management and the Tennessee Valley Authority*; 1994.

13. *Report of Phase I Environmental Site Assessment, East Gadsden Development Project*, Qore Inc, 1999.
14. *Limited Phase II Environmental Site Assessment for East Gadsden Development Project*, Qore Inc. September 7, 1999.
15. *Site Plan Concept 4 map*, Suncoast Design Group Inc., September 23, 1999.
16. Prestridge, Kenneth L., Interview with City of Gadsden officials during site visit, 4 November 1999.
17. Copies of Sandborn Insurance maps from Gadsden Public Library.
18. Region Risk Based Concentration Table, published by Region III, US EPA, 13 April 2000.

**LIST OF ATTACHMENTS**

<b>Attachment 1</b>	7.5 Minute Topographic Map for Site
<b>Attachment 2</b>	County Map
<b>Attachment 3</b>	Groundwater PA Report
<b>Attachment 4</b>	Site Diagram
<b>Attachment 5</b>	Design map for development of site
<b>Attachment 6</b>	Site Diagram with XRF reading locations
<b>Attachment 7</b>	Endangered Species List (By County)
<b>Attachment 8</b>	Low Flow Data
<b>Attachment 9</b>	Water Classification
<b>Attachment 10</b>	Flood Map
<b>Attachment 11</b>	Analytical Excerpt from Qore Reports
<b>Attachment 12</b>	Photos



**ATTACHMENT 1**

**OVERSIZED**

**DOCUMENT**

**ATTACHMENT 2**

**OVERSIZED**

**DOCUMENT**

**ATTACHMENT 3**



## ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**JAMES W. WARR**  
DIRECTOR

**DON SIEGELMAN**  
GOVERNOR

February 22, 2000

### MEMORANDUM

**TO:** Stephen A. Cobb, Chief  
Hazardous Waste Branch  
Land Division

**FROM:** Joseph L. Gibson, Hydrogeologist *J. L. G.*  
Groundwater Branch  
Water Division

**RE:** Preliminary Assessment - Groundwater  
East Gadsden Development Site  
Gadsden, Etowah County, Alabama

Facsimiles: (334)  
Administration: 271-7950  
General Counsel: 394-4332  
Air: 279-3044  
Land: 279-3050  
Water: 279-3051  
Groundwater: 270-5631  
Field Operations: 272-8131  
Laboratory: 277-6718  
Mining: 394-4326  
Education/Outreach: 394-4383

The following groundwater report was prepared through a search of literature and information available to the Groundwater Branch. The author has not conducted a site reconnaissance and the findings in this report have not been field verified.

### LOCATION

The East Gadsden Development Site is located in Gadsden, Etowah County, Alabama (Figure 1). The United States Geological Survey's (USGS) 7.5 Minute Quadrangle Map entitled Gadsden East, Alabama shows the location of the site to be in the northwest ¼ of the northwest ¼ of Section 10 Township 12 South, Range 6 East (Figure 2). The latitude and longitude have been determined by GPS to be 34° 00' 31.38" North Latitude and 85° 59' 46.56" West Longitude.

### TOPOGRAPHY AND SURFACE WATER

The Site is situated in central Etowah County in what is considered to be the Coosa Valley District of the Alabama Valley and Ridge physiographic section. The topography of Etowah County is controlled by the geology and is characterized by narrow linear ridges and wide valleys. The surface elevations of the valley floor in the Coosa Valley District typically range from 500 to 600 feet above mean sea level (MSL) (Bossong, 1989). The surface elevation at the sites is approximately 520 feet MSL.



Surface water drainage from the site (Figure 3) appears to be to the west into the Coosa River. The Coosa River makes-up the entire 15-mile surface water pathway from the site and is listed in the ADEM Admin. Code R. 335-6-11-.02 with a use classification of fish and wildlife. The Coosa River in the vicinity of Gadsden has a seven day ten year low flow rate of 1,220 cfs and a seven day two year low flow rate of 1,940 cfs (Hayes, 1978). No known surface water intakes for public drinking water supplies are located along the 15-mile surface water pathway from the site.

## **SOILS**

The Soil Conservation Service (SCS) classifies soils at the site as Holston – Urban Land complex, 2 to 15 percent slopes (Figure 4). The soils in this classification are described by the SCS as areas of gently sloping to moderately steep, well drained Holston soils and areas of urban land (Montgomery, et al., 1978).

Holston soils make-up 40 to 60 percent of this map unit and consist of yellowish-brown fine sandy loam, loam, or sandy clay loam; yellowish-brown silty clay loam; and mottled yellowish-brown to strong brown and red silty clay loam. The permeability of the Holston soils is moderate (Montgomery, et al., 1978).

Urban land make-up 20 to 40 percent of this map unit and consist of areas that have been altered to an extent that identification is not possible. It includes areas covered by buildings, sidewalks, streets, and areas disturbed by grading, cutting, and filling (Montgomery, et al., 1978).

## **GEOLOGY**

Geologic units in Etowah County are sedimentary in origin and range in age from Cambrian to Pennsylvanian. Quaternary alluvial deposits of the ancestral Coosa River also occur in Etowah County. The northwestern portion of the county is within the Appalachian Plateau physiographic province, and consists of broad synclinal mountains separated by folded and faulted anticlinal valleys. The southeastern portion of the county is within the Valley and Ridge physiographic province, and consists of a series of folded overlapping imbricate thrust sheets (Mann and Baker, 1995).

The site is located within the outcrop area of the Quaternary age alluvial and low terrace deposits (Figure 5) (Osborne, et al, 1988). The alluvial and low terrace deposits range in thickness from 0 to 70 feet in Etowah County, and are composed of medium to coarse grained gravel with a sandy matrix and a fine to medium grained sand with interbedded lens of gravel and clay. The alluvial deposits in central Etowah County overlie the Conasauga Formation, which is composed of thin bedded, dark-gray, fine-grained limestone interbedded with thin fissile shale (Mann and Baker, 1995).

The Gadsden Fault traverses approximately 0.75 miles to the north of the site (Osborne, et al, 1988). The Gadsden Fault is a thrust fault and generally trends from the west to the east. The structural features in the vicinity of the site (Figure 5) should enhance the fractured nature of the bedrock. The site is located in an area that is susceptible to karst formation.

## **HYDROGEOLOGY**

The site is located within the recharge area for the Watercourse aquifer, and in the outcrop area of the Quaternary alluvial and low terrace deposits. Groundwater in this formation occurs under unconfined conditions and typically yields small quantities to wells. The Watercourse aquifer is hydraulically interconnected with the underlying Conasauga Formation. Groundwater in this formation occurs in interconnected solution channels, and potentially large amounts of water can be obtained from these features (Mann and Baker, 1995). Depth to groundwater at the site is expected to be between less than 25 feet.

There are no active public water supply wells located within 4 miles of the site (Figure 6). The closest active public water supply well is operated by Glencoe Water Works Board, and is located approximately 5.5 miles to the southeast of the site. The site is not in a designated wellhead protection area, and no wellhead protection areas are located within four miles of the site. Due to the urban nature of the site private water supply wells are not expected in the immediate vicinity of the site.

## **CLIMATE**

The climate of Etowah County is characterized as humid subtropical with hot summers and mild winters (Mann and Baker, 1995). The average annual temperature is approximately 61° with the average temperature in the in the summer is 78° and in the winter is 44° (Montgomery, et al., 1978). The average annual rainfall is approximately 54 inches. Approximately 21 inches of the 54 inches of rain per year runs off into the streams (Harkins, 1972).

cc: Fred Mason, Chief, Hydrogeology Unit  
Jymalyn Redmond, Chief, Site Assessment Unit  
Ken Prestridge, Site Assessment Unit



## **SELECTED REFERENCES**

Bossong, C.R., 1989, Geohydrology and Susceptibility of Major Aquifers to Surface Contamination in Alabama; Area 2, United States Geological Survey, Water Resources Investigation Report 88-4177.

Harkins, J. R., 1972, Surface-Water Availability, Etowah County, Alabama: Map 108: Geological Survey of Alabama

Hayes, Eugene C., 1978, 7-Day Low Flows and Flow Duration of Alabama Streams Through 1973, Geological Survey of Alabama, Bulletin 113.

Mann, Steven D. and Baker, R. M., 1995, Ground-Water Availability in Etowah County, Alabama: To Accompany Special Map 243: Geological Survey of Alabama.

Montgomery, Charles F., Neal, H. B., and Anderson, W. V., 1978, Soil Survey of Etowah County, Alabama; United States Department of Agriculture, Soil Conservation Service.

Moore, James D., 1992, Aquifers in Alabama, Geological Survey of Alabama, Special Map 231.

Osborne, W. E., Szabo, M. W., Neathery, T. L., and Copeland, C. W. Jr., 1988, Geologic Map of Alabama, Geological Survey of Alabama, Special Map 220 Northwest Sheet.

## GROUNDWATER ROUTE WORKSHEET REQUIREMENTS

### Route Characteristics

<u>Aquifer of concern</u>	Watercourse aquifer
<u>Gross Precipitation</u>	54 inches per year
<u>Net Precipitation</u>	6 inches (from HRS)
<u>Depth to Aquifer</u>	Less than 25 feet
<u>Slope</u>	2 to 15 percent
<u>Permeability of Unsaturated Zone</u>	$4.2 \times 10^{-4}$ to $1.4 \times 10^{-3}$ cm/sec.
<u>Is the Site Susceptible to Karst</u>	Yes

### TARGETS

Groundwater use —There are no active public water supply wells located within four miles of the site.

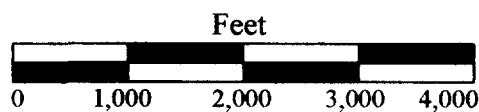
Distance to nearest active public water supply well – Approximately 5.5 miles.

# East Gadsden Development Site



Figure 1

# Site Location Map



East Gadsden Development Site  
Gadsden, Etowah County, Alabama

Gadsden East, Alabama  
U.S.G.S. Topographic Map  
1967  
Photorevised 1986

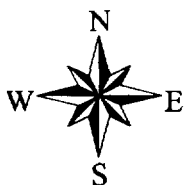
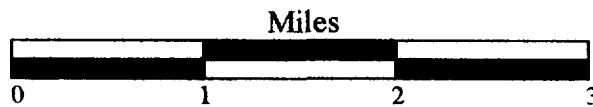
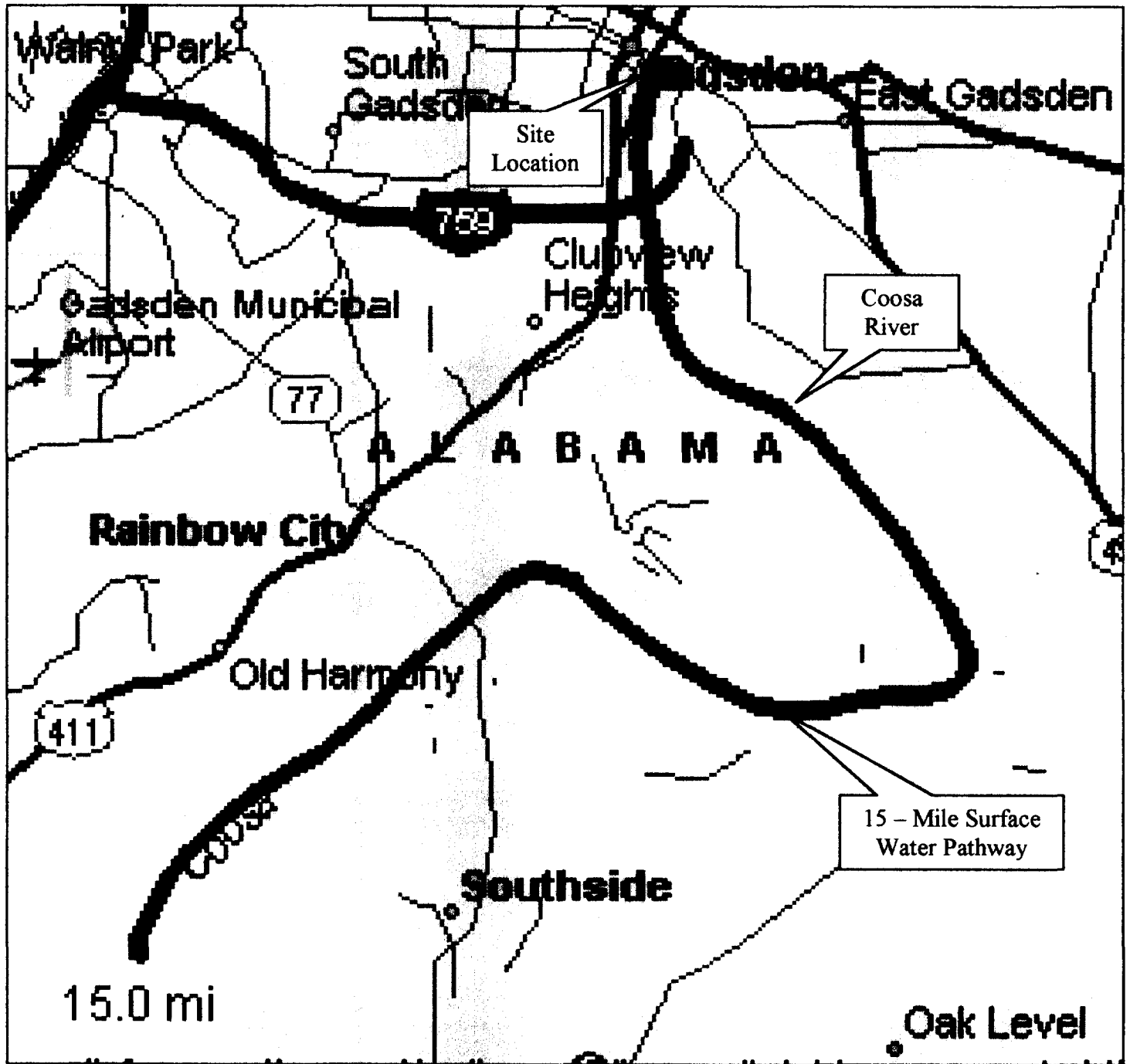


Figure 2

1<sup>st</sup> Mile Surface Water Pathway  
East Gadsden Development Site



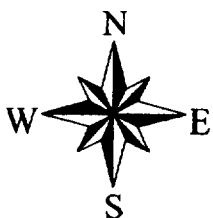
Base Map – Streets 2000  
Microsoft Corporation 1988 - 1999

Figure 3

# Soil Types Mapped at the East Gadsden Development Site



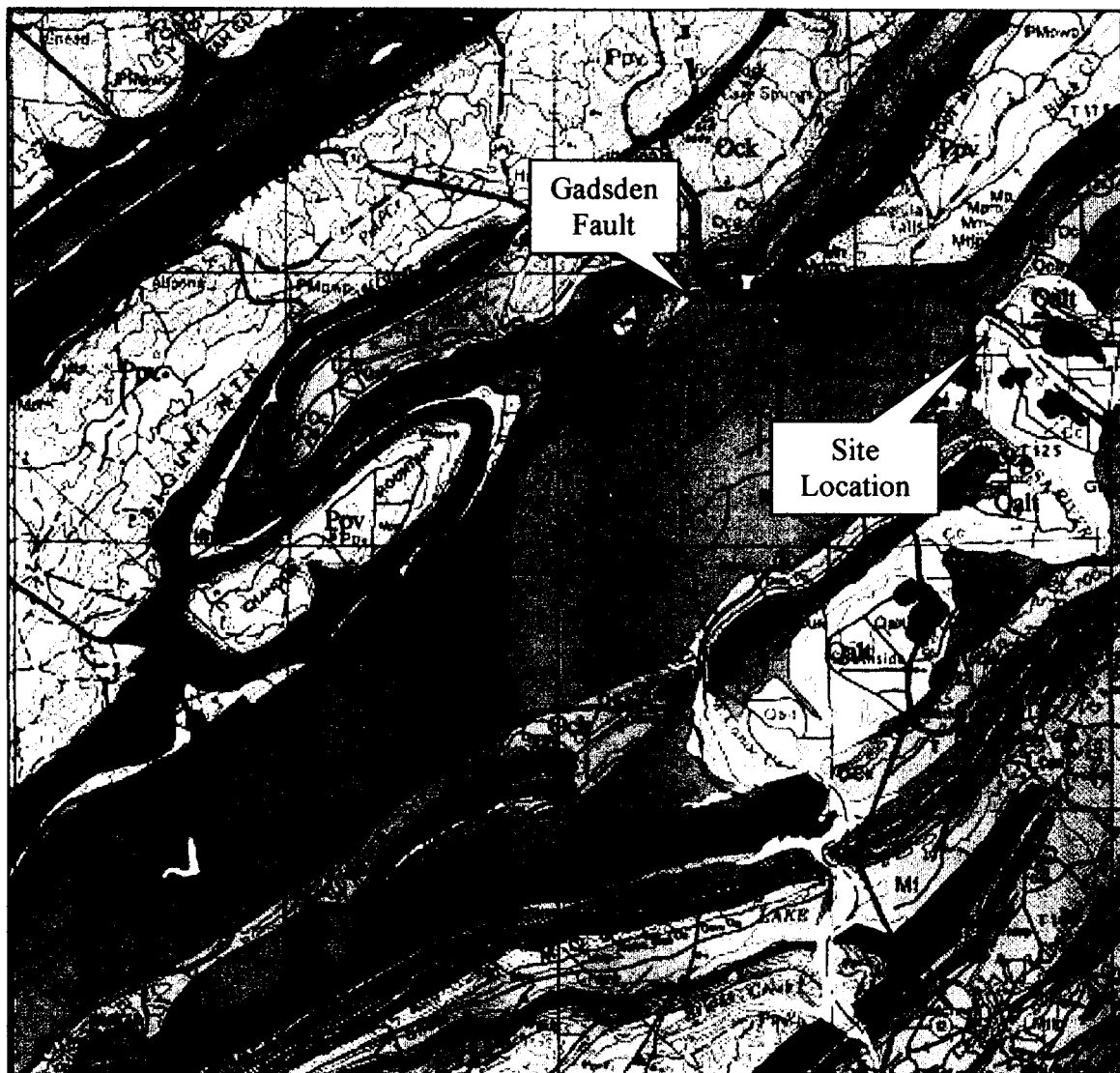
33 – Holston - Urban land complex 2 to 15 % slopes



U.S. Department of Agriculture  
Soil Conservation Service  
Etowah County, Alabama  
Sheet # 29

Figure 4

# Geologic Units and Structures Near the East Gadsden Development Site



Qalt – Quaternary alluvial & low terrace deposits

Ppv – Pottsville Formation

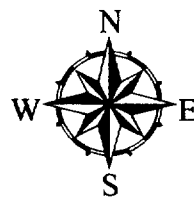
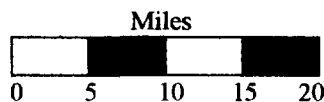
Mb – Bangor Limestone

Ock - Knox Group Undifferentiated

Cc - Conasauga Formation



- Thrust Fault



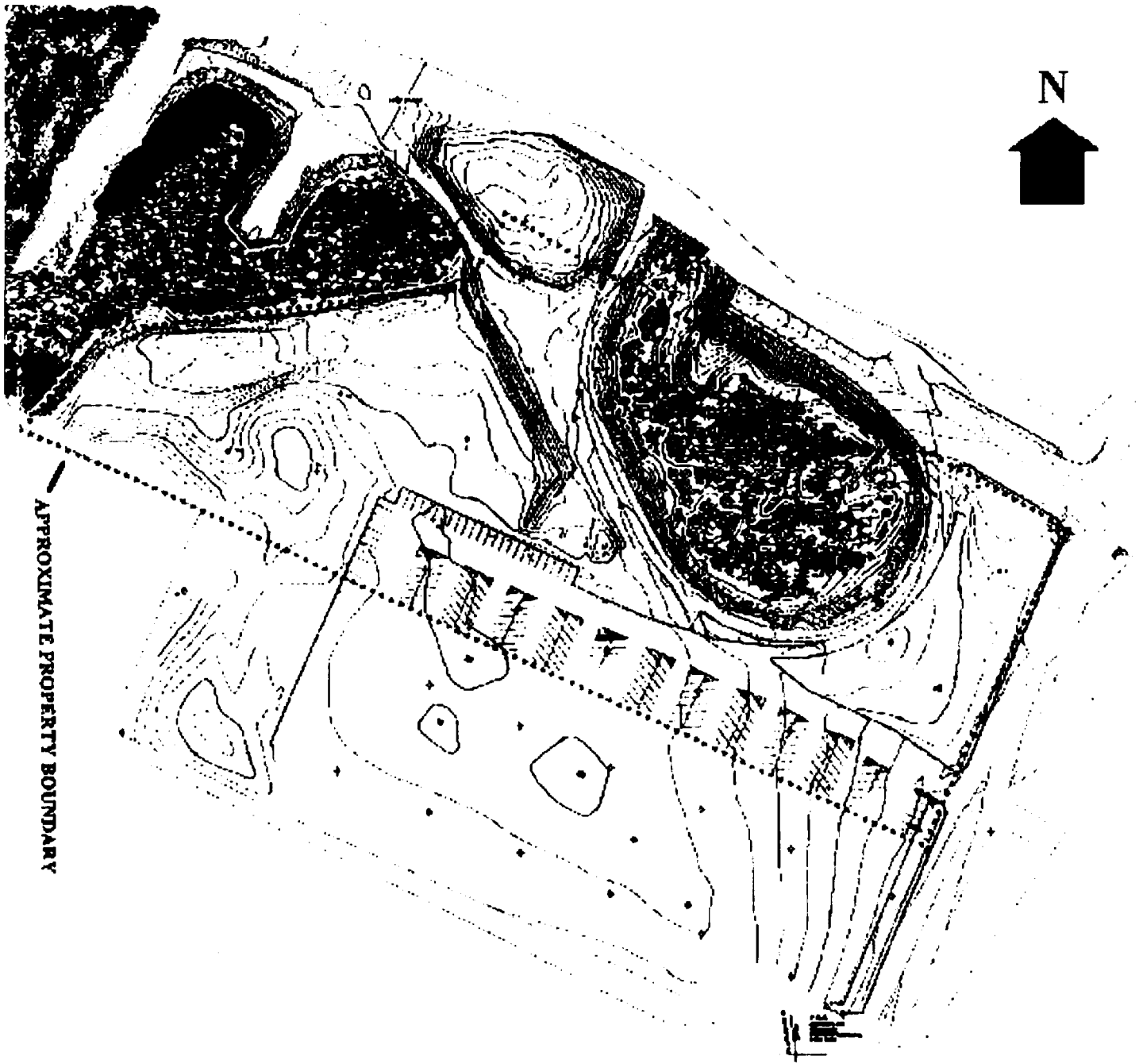
Geologic Map of Alabama  
Northeast Sheet 1988

W.E. Osborne, Michael W. Szabo, Thornton L. Neathery, and Charles W. Copeland Jr.  
Geological Survey of Alabama Special Map 220

Figure 5

**ATTACHMENT 4**





East Gadsden Site – Corner of Hood Ave and Broad Street  
Gadsden, Alabama

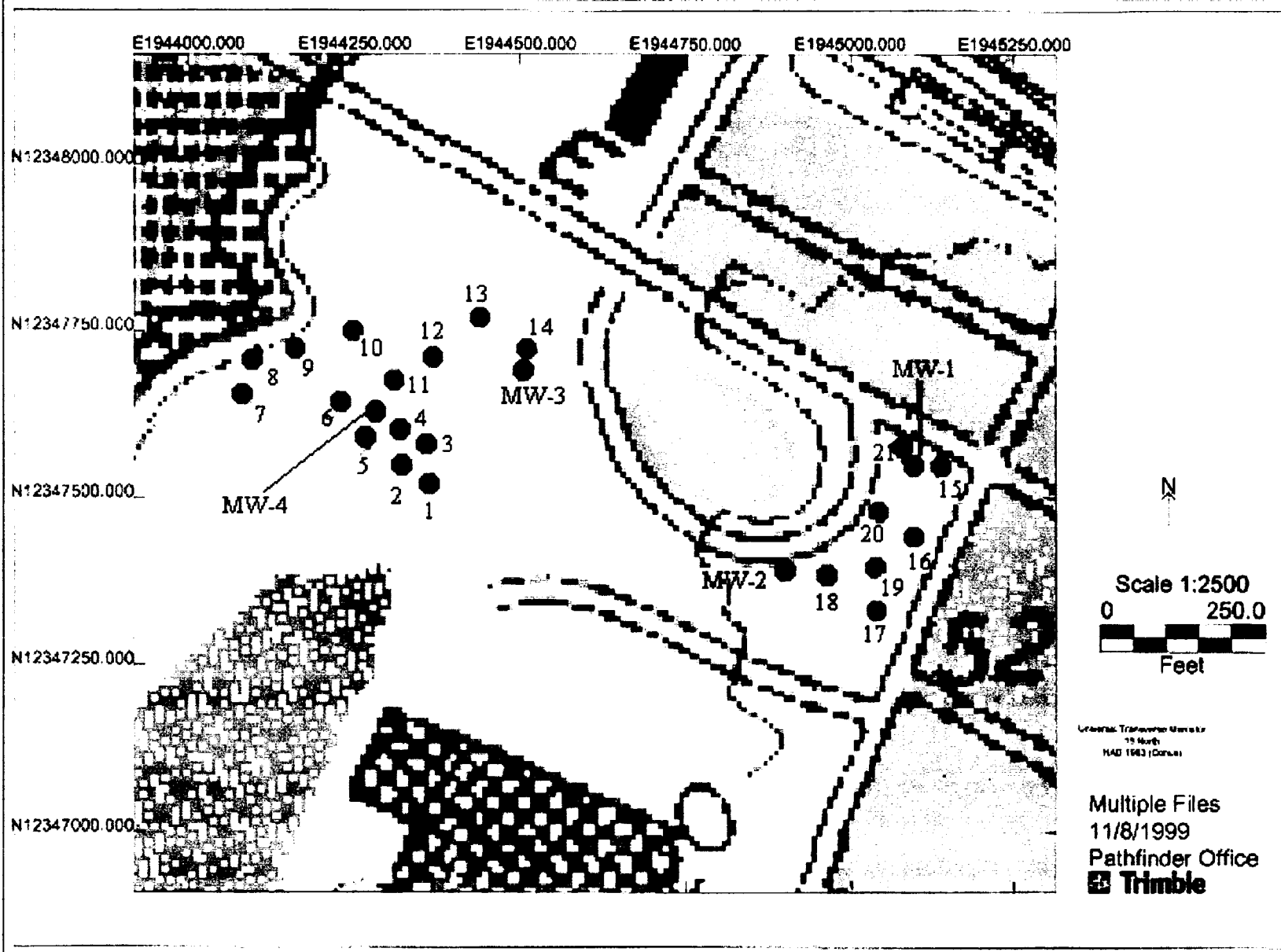
**ATTACHMENT 5**

**OVERSIZED**

**DOCUMENT**

**ATTACHMENT 6**

# XRF Screening Locations



**ATTACHMENT 7**

# ENDANGERED SPECIES BY COUNTY LIST

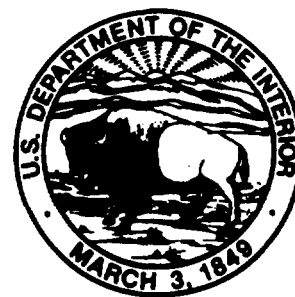
## STATE: ALABAMA

	<u>CERTAINTY OF OCCURRENCE</u>	<u>GROUP</u>	<u>STATUS</u>
( <i>Sarracenia rubra</i> ssp. <i>alabamensis</i> ) SNAIL, TULOTOMA ( <i>Tulotoma magnifica</i> )	KNOWN	SNAIL	T
STORK, WOOD ( <i>Mycteria americana</i> )	POSSIBLE	BIRD	E
<u>COUNTY: ESCAMBIA</u>			
SNAKE, EASTERN INDIGO ( <i>Drymarchon corais couperi</i> )	KNOWN	REPTILE	E
WOODPECKER, RED-COCKADED ( <i>Picoides borealis</i> )	KNOWN	BIRD	E
<u>COUNTY: ETOWAH</u>			
BAT, INDIANA ( <i>Myotis sodalis</i> )	POSSIBLE	MAMMAL	E
BUTTONS, MOHR'S BARBARA'S ( <i>Marshallia mohrii</i> )	KNOWN	PLANT	T
PITCHER-PLANT, GREEN ( <i>Sarracenia oreophila</i> )	KNOWN	PLANT	E
TURTLE, FLATTENED MUSK ( <i>Sternotherus depressus</i> )	KNOWN	REPTILE	T
<u>COUNTY: FAYETTE</u>			
BAT, INDIANA ( <i>Myotis sodalis</i> )	POSSIBLE	MAMMAL	E
TURTLE, FLATTENED MUSK ( <i>Sternotherus depressus</i> )	KNOWN	REPTILE	T
WOODPECKER, RED-COCKADED ( <i>Picoides borealis</i> )	KNOWN	BIRD	E
<u>COUNTY: FRANKLIN</u>			
BAT, INDIANA ( <i>Myotis sodalis</i> )	POSSIBLE	MAMMAL	E
BLADDERPOD, LYRATE ( <i>Lesquerella lyrata</i> )	KNOWN	PLANT	T
GRASS, TENNESSEE YELLOW-EYED ( <i>Xyris tennesseensis</i> )	KNOWN	PLANT	E
PRAIRIE-CLOVER, LEAFY ( <i>Dalea foliosa</i> )	KNOWN	PLANT	E
<u>COUNTY: GENEVA</u>			
BAT, INDIANA ( <i>Myotis sodalis</i> )	POSSIBLE	MAMMAL	E

**ATTACHMENT 8**



**LOW-FLOW AND FLOW-DURATION CHARACTERISTICS  
OF ALABAMA STREAMS**



**Prepared by  
the United States Department of the Interior, Geological Survey  
In cooperation with  
the Alabama Department of Environmental Management  
and the Tennessee Valley Authority**

02400500 COOSA RIVER AT GADSDEN, ALA.

LOCATION.--Lat 34°00'37", long 86°13'34", in NW<sup>1</sup>/<sub>4</sub> sec. 10, T. 12 S., R. 6 E., Etowah County, Hydrologic Unit 03150106, on Forrest Avenue in Gadsden, 1.5 mi upstream from Big Wills Creek, and at mile 174.8.

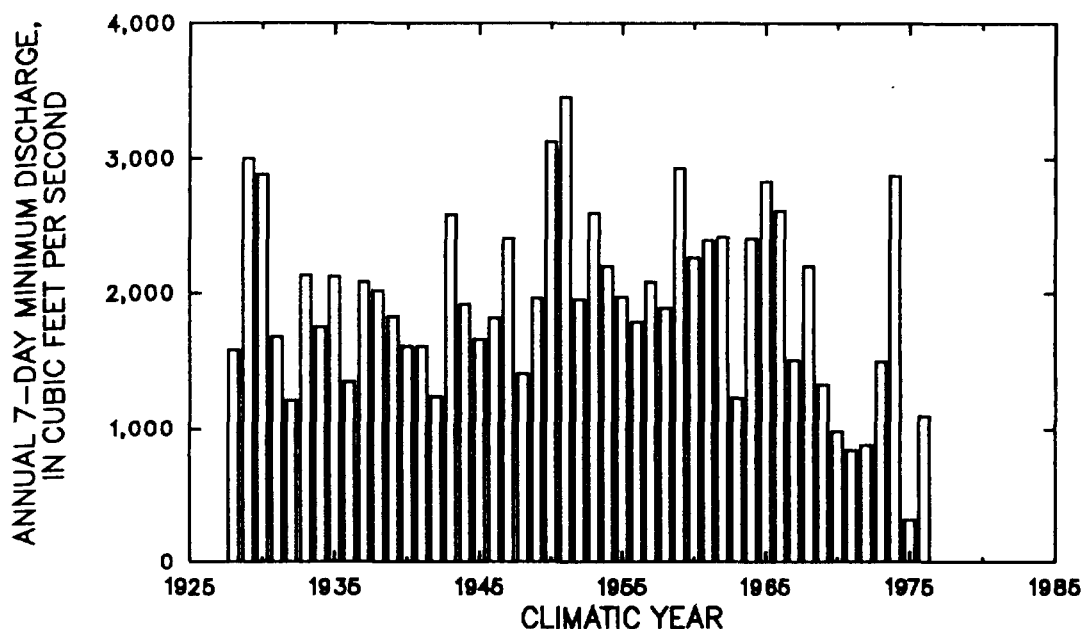
DRAINAGE AREA.--5,805 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1926 to September 1976.

AVERAGE DISCHARGE.--50 years (water years 1927-76), 9,468 ft<sup>3</sup>/s.

REMARKS.--Since December 1949, flow regulated by Allatoona Reservoir and since April 1961, by Weiss Reservoir. Low-flow characteristics were estimated for pre-regulated conditions.

PLOT OF ANNUAL 7-DAY MINIMUM DISCHARGES



LOW-FLOW CHARACTERISTICS  
(Based on 1928-49 climatic years)

Low-flow characteristic	Discharge (cubic feet per second)	Time-sampling error (in percent)
7-day, 2-year	1,830	6
7-day, 10-year	1,360	6

## 02400500 COOSA RIVER AT GADSDEN, ALA.--Continued

NON-EXCEEDANCE PERCENTILES OF ANNUAL 7-DAY MINIMUM DISCHARGES  
(Based on 1962-76 climatic years)

Discharge, in cubic feet per second, which was not exceeded for indicated percentage of years									
Percent	10	20	30	40	50	60	70	80	90
Discharge	631	900	1,080	1,270	1,500	1,920	2,400	2,570	2,850

FLOW-DURATION CHARACTERISTICS  
(Based on 1962-76 water years)

Discharge, in cubic feet per second, which was exceeded for indicated percentage of days							
Percent	5	10	25	50	75	90	95
Discharge	30,100	25,900	12,900	7,680	4,080	2,070	537

## 02401000 BIG WILLS CREEK NEAR REECE CITY, ALA.

LOCATION.--Lat 34°05'53", long 86°02'17", in SE<sup>1</sup>/<sub>4</sub> sec. 6, T. 11 S., R. 6 E., Etowah County, Hydrologic Unit 03150106, on county road, 1 mi upstream from Fisher Creek, 1.8 mi northwest of Reece City, and at mile 25.0.

DRAINAGE AREA.--182 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1943 to September 1970, October 1986 to September 1990.

AVERAGE DISCHARGE.--31 years (water years 1944-70, 1987-90), 303 ft<sup>3</sup>/s.

LOW-FLOW CHARACTERISTICS  
(Based on 1946-70, 1988-90 climatic years)

Low-flow characteristic	Discharge (cubic feet per second)	Time-sampling error (in percent)
7-day, 2-year	48	7
7-day, 10-year	31	9

FLOW-DURATION CHARACTERISTICS  
(Based on 1944-70, 1987-90 water years)

Discharge, in cubic feet per second, which was exceeded for indicated percentage of days							
Percent	5	10	25	50	75	90	95
Discharge	970	617	318	152	78	52	43

**ATTACHMENT 9**

# ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

## Water Division - Water Quality Program

### Chapter 335-6-11 Water Use Classifications For Interstate and Intrastate Waters

#### Table of Contents

335-6-11-.01	The Use Classification System
335-6-11-.02	Use Classifications

#### 335-6-11-.01 The Use Classification System

(1) Use classifications utilized by the State of Alabama are as follows:

Public Water Supply.....	PWS
Swimming and Other Whole Body	
Water-Contact Sports.....	S
Shellfish Harvesting.....	SH
Fish and Wildlife.....	F&W
Agricultural and Industrial	
Water Supply.....	A&I
Industrial Operations.....	IO
Navigation.....	N
Outstanding Alabama Water.....	OAW

(2) Use classifications apply water quality criteria adopted for particular uses based on existing utilization, uses reasonably expected in the future, and those uses not now possible because of correctable pollution but which could be made if the effects of pollution were controlled or eliminated. Of necessity, the assignment of use classifications must take into consideration the physical capability of waters to meet certain uses.

(3) Those use classifications presently included in the standards are reviewed informally by the Department's staff as the need arises, and the entire standards package, to include the use classifications, receives a formal review at least once each three years. Efforts currently underway through local 201 planning projects will provide additional technical data on certain streams in the State, information on treatment alternatives, and applicability of various management techniques, which, when available, will hopefully lead to new decisions regarding use classifications. Of particular interest are those segments which are currently classified for any usage which has an associated degree of quality

## (6) THE COOSA RIVER BASIN

INTERSTATE WATERS

Stream	From	To	Classification
COOSA RIVER	Its junction with the TALLAPOOSA RIVER	Jordan Dam	F&W
COOSA RIVER (Lake Jordan)	Jordan Dam	Mitchell Dam	S/F&W
COOSA RIVER (Lake Jordan)	Bouldin Dam	Alabama Highway 111	PWS/S/F&W
COOSA RIVER (Lake Mitchell)	Mitchell Dam	Lay Dam	PWS/S/F&W
COOSA RIVER (Lay Lake)	Lay Dam	Southern RR Bridge (1-1/3 miles above Yellowleaf Creek)	PWS/S/F&W
COOSA RIVER (Lay Lake)	Southern RR Bridge (1-1/3 miles above Yellowleaf Creek)	River Mile 89 (1-1/2 miles above Talladega Creek)	F&W <sup>1</sup>
COOSA RIVER (Lay Lake)	River Mile 89 (1-1/2 miles above Talladega Creek)	Logan Martin Dam	PWS/F&W
COOSA RIVER (Logan Martin Lake) (Lake Henry)	Logan Martin Dam	McCardney's Ferry (3 miles upstream of Big Canoe Creek)	S/F&W
COOSA RIVER (Lake Henry)	McCardney's Ferry (3 miles upstream of Big Canoe Creek)	City of Gadsden's water supply intake	F&W
COOSA RIVER (Lake Henry)	City of Gadsden's water supply intake	Weiss Dam powerhouse	PWS/F&W
COOSA RIVER	Weiss Dam powerhouse	Weiss Dam	F&W
COOSA RIVER (Weiss Lake)	Weiss Dam and Weiss Dam powerhouse	Spring Creek	PWS/S/F&W

---

<sup>1</sup> Applicable dissolved oxygen level below existing impoundments is 4.0 mg/l.

**ATTACHMENT 10**

**NATIONAL FLOOD INSURANCE PROGRAM**

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**CITY OF  
GADSDEN, ALABAMA  
ETOWAH COUNTY**

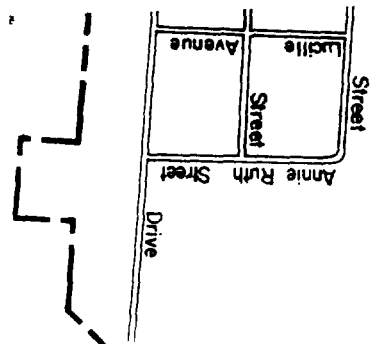
**PANEL 20 OF 20**

**COMMUNITY-PANEL NUMBER  
010080 0020 C**

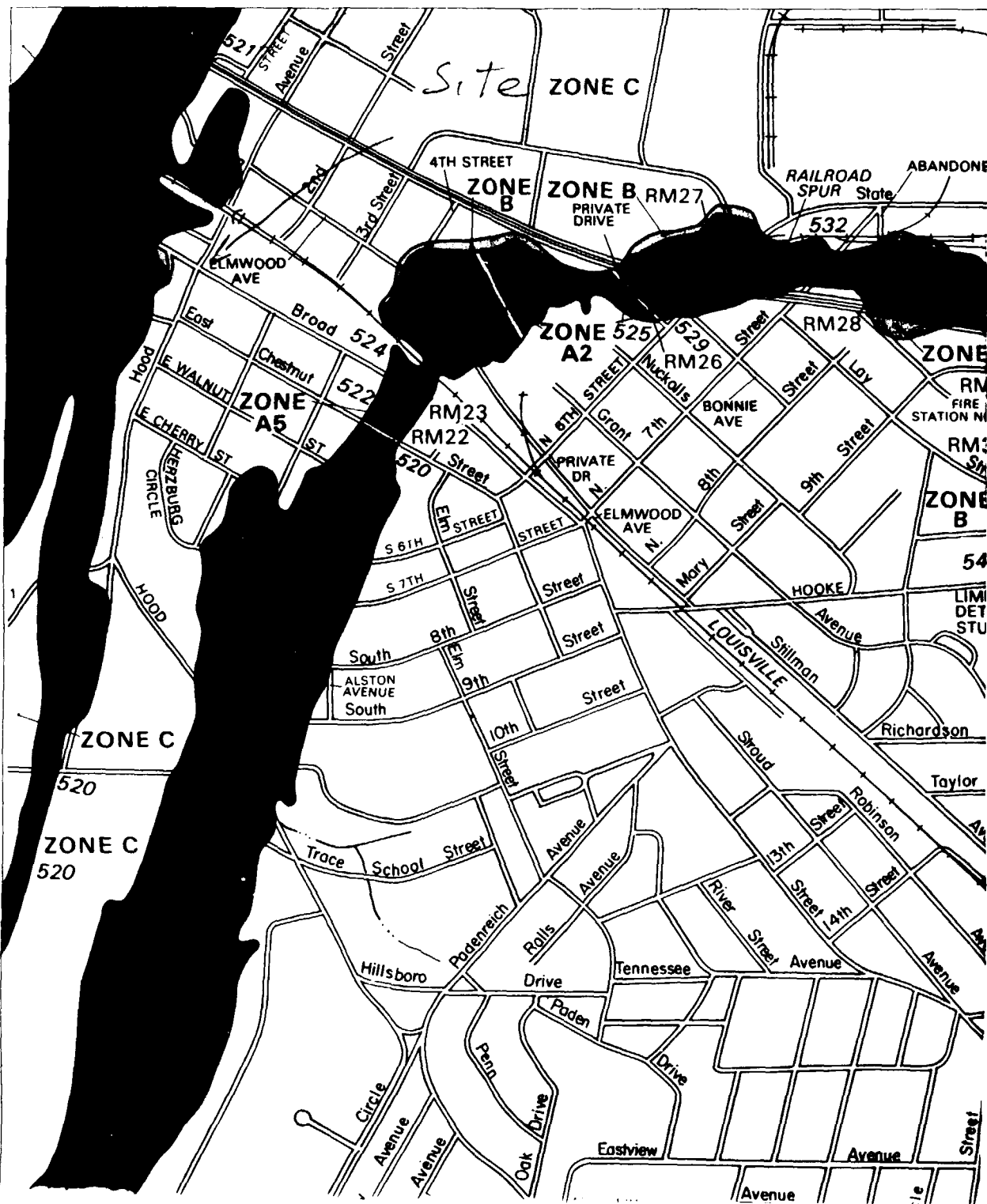
**EFFECTIVE DATE:  
APRIL 4, 1983**



**Federal Emergency Management Agency**







## KEY TO MAP

500-Year Flood Boundary ————

100-Year Flood Boundary - - - - -

Zone Designations\*

100-Year Flood Boundary ————

500-Year Flood Boundary ————

Base Flood Elevation Line  
With Elevation In Feet\*\*

513

Base Flood Elevation in Feet  
Where Uniform Within Zone\*\*

(EL 987)

Elevation Reference Mark

RM7x

Zone D Boundary ————

River Mile

•RM1.5

\*\*Referenced to the National Geodetic Vertical Datum of 1929

## \*EXPLANATION OF ZONE DESIGNATIONS

### ZONE

### EXPLANATION

- A** Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
- A0** Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
- AH** Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
- A1-A30** Areas of 100-year flood; base flood elevations and flood hazard factors determined.
- A99** Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
- B** Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
- C** Areas of minimal flooding. (No shading)
- D** Areas of undetermined, but possible, flood hazards.
- V** Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
- V1-V30** Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

**ATTACHMENT 11**



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 5-7'	18710	Acenaphthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Acenaphthlene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Aniline	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Azobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzidine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzoic Acid	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Benzo(a)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzo(b)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzo(k)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzo(g,h,i)perylene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzo(a)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Benzyl alcohol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Butyl benzyl phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		4-Chloroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		1-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		4-Chloro-3-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		2-Chlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Chrysene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
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## Laboratory Report

Client : Qore Property Sciences  
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Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 5-7'	18710	Dibenz(a,h)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Dibenzofuran	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Di-n-butylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		1,3-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		1,4-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		1,2-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.070	EPA 8270	JLB	08/30/99/1540
		2,4-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		2,6-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Diethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2,4-Dimethylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Dimethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		2,4-Dinitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		2,4-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2,6-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Di-n-octylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Fluorene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Hexachlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Hexachlorobutadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Hexachlorocyclopentadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Hexachloroethane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Isophorone	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2-Methylnaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 5-7'	18710	3-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		4-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Naphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		3-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		4-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Nitrobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		4-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		N-Nitrosodimethylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		N-Nitrosodiphenylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Pentachlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Phenanthrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		Phenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1540
		2,4,5-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		2,4,6-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1540
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	44.6	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	ND	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	245	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	29.1	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	ND	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 5-7'	18710	Benzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Bromobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Bromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Bromodichloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Bromoform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Bromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		n-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		sec-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		tert-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Carbon tetrachloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Chlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Chloroethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		Chloroform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Chloromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		2-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		4-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Dibromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		1,2-Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,2-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 5-7'	18710	1,3-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,4-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Dichlorodifluoromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,1-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,2-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,1-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		cis-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		trans-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,3-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		2,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,1-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		cis-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		trans-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Ethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Hexachlorobutadiene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		Isopropylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		4-Isopropyltoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Methyl-tert-butyl ether	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Methylene chloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Naphthalene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 5-7'	18710	n-Propylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Styrene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Tetrachloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Toluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		1,1,1-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,1,2-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Trichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Trichlorofluoromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		1,2,3-Trichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		Vinyl chloride	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1102
		Total Xylenes	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1102
		PCB-1016	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436
		PCB-1221	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436
		PCB-1232	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436
		PCB-1242	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436
		PCB-1248	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436
		PCB-1254	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436
		PCB-1260	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1436





# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 18-20'	18711	Acenaphthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Acenaphthlene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Aniline	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Azobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzidine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzoic Acid	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Benzo(a)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzo(b)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzo(k)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzo(g,h,i)perylene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzo(a)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Benzyl alcohol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Butyl benzyl phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		4-Chloroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		1-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		4-Chloro-3-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		2-Chlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Chrysene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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## Laboratory Report

**Client** : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222

**Client Project #** : East Gadsden

**Sample Date** : 8/26/99

**Sampler** : KMB

**Report Date** : 3-Sep-99

**ASI Project #** : 4086

**Date Received** : 27-Aug-99

**Sample Matrix** : Soil

**Lab ID** : See Below

**Sample ID** : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 18-20'	18711	Dibenz(a,h)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Dibenzofuran	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Di-n-butylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		1,3-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		1,4-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		1,2-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.070	EPA 8270	JLB	08/30/99/1612
		2,4-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		2,6-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Diethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2,4-Dimethylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Dimethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		2,4-Dinitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		2,4-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2,6-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Di-n-octylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Fluorene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Hexachlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Hexachlorobutadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Hexachlorocyclopentadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Hexachloroethane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Isophorone	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2-Methylnaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612



# Analytical Systems, Inc.

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## Laboratory Report

**Client** : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
**Client Project #** : East Gadsden  
**Sample Date** : 8/26/99  
**Sampler** : KMB

**Report Date** : 3-Sep-99  
**ASI Project #** : 4086  
**Date Received** : 27-Aug-99  
**Sample Matrix** : Soil  
**Lab ID** : See Below  
**Sample ID** : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 18-20'	18711	3-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		4-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Naphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		3-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		4-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Nitrobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		4-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		N-Nitrosodimethylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		N-Nitrosodiphenylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Pentachlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Phenanthrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		Phenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1612
		2,4,5-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		2,4,6-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1612
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	37.5	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	ND	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	14.6	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	25.0	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	ND	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 18-20'	18711	Benzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Bromobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Bromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Bromodichloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Bromoform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Bromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		n-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		sec-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		tert-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Carbon tetrachloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Chlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Chloroethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		Chloroform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Chloromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		2-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		4-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Dibromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		1,2-Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,2-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 18-20'	18711	1,3-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,4-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Dichlorodifluoromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,1-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,2-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,1-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		cis-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		trans-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,3-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		2,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,1-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		cis-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		trans-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Ethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Hexachlorobutadiene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		Isopropylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		4-Isopropyltoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Methyl-tert-butyl ether	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Methylene chloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Naphthalene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
2 18-20'	18711	n-Propylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Styrene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Tetrachloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Toluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		1,1,1-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,1,2-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Trichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Trichlorofluoromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		1,2,3-Trichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		Vinyl chloride	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1133
		Total Xylenes	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1133
		PCB-1016	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508
		PCB-1221	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508
		PCB-1232	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508
		PCB-1242	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508
		PCB-1248	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508
		PCB-1254	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508
		PCB-1260	ND	mg/Kg	0.04	EPA 8081	JLB	08/30/99/1508



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 5-7'	18712	Acenaphthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Acenaphthlene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Aniline	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Azobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzidine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzoic Acid	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Benzo(a)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzo(b)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzo(k)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzo(g,h,i)perylene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzo(a)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Benzyl alcohol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Butyl benzyl phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		4-Chloroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		1-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		4-Chloro-3-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		2-Chlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Chrysene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 5-7'	18712	Dibenz(a,h)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Dibenzofuran	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Di-n-butylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		1,3-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		1,4-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		1,2-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.070	EPA 8270	JLB	08/30/99/1645
		2,4-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		2,6-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Diethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2,4-Dimethylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Dimethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		2,4-Dinitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		2,4-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2,6-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Di-n-octylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Fluoranthene	0.042	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Fluorene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Hexachlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Hexachlorobutadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Hexachlorocyclopentadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Hexachloroethane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Isophorone	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2-Methylnaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645





# Analytical Systems, Inc.

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## Laboratory Report

**Client** : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
**Client Project #** : East Gadsden  
**Sample Date** : 8/26/99  
**Sampler** : KMB

**Report Date** : 3-Sep-99  
**ASI Project #** : 4086  
**Date Received** : 27-Aug-99  
**Sample Matrix** : Soil  
**Lab ID** : See Below  
**Sample ID** : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 5-7'	18712	3-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		4-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Naphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		3-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		4-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Nitrobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		4-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		N-Nitrosodimethylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		N-Nitrosodiphenylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Pentachlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Phenanthrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		Phenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Pyrene	0.069	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1645
		2,4,5-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		2,4,6-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1645
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	56.0	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	ND	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	16.3	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	21.0	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	ND	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



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## Laboratory Report

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Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 5-7	18712	Benzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Bromobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Bromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Bromodichloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Bromoform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Bromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		n-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		sec-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		tert-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Carbon tetrachloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Chlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Chloroethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		Chloroform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Chloromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		2-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		4-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Dibromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		1,2-Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,2-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 5-7'	18712	1,3-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,4-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Dichlorodifluoromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,1-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,2-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,1-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		cis-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		trans-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,3-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		2,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,1-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		cis-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		trans-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Ethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Hexachlorobutadiene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		Isopropylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		4-Isopropyltoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Methyl-tert-butyl ether	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Methylene chloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Naphthalene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 5-7'	18712	n-Propylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Styrene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Tetrachloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Toluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		1,1,1-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,1,2-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Trichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Trichlorofluoromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		1,2,3-Trichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212
		Vinyl chloride	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1212
		Total Xylenes	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1212



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## Laboratory Report

**Client** : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
**Client Project #** : East Gadsden  
**Sample Date** : 8/26/99  
**Sampler** : KMB

**Report Date** : 3-Sep-99  
**ASI Project #** : 4086  
**Date Received** : 27-Aug-99  
**Sample Matrix** : Soil  
**Lab ID** : See Below  
**Sample ID** : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 18-20'	18713	Acenaphthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Acenaphthlene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Aniline	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Azobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzidine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzoic Acid	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Benzo(a)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzo(b)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzo(k)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzo(g,h,i)perylene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzo(a)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Benzyl alcohol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Butyl benzyl phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		4-Chloroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		1-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		4-Chloro-3-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		2-Chlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Chrysene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 18-20'	18713	Dibenz(a,h)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Dibenzofuran	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Di-n-butylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		1,3-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		1,4-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		1,2-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.070	EPA 8270	JLB	08/30/99/1718
		2,4-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		2,6-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Diethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2,4-Dimethylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Dimethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		2,4-Dinitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		2,4-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2,6-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Di-n-octylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Fluorene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Hexachlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Hexachlorobutadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Hexachlorocyclopentadiene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Hexachloroethane	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Isophorone	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2-Methylnaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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## Laboratory Report

**Client** : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
**Client Project #** : East Gadsden  
**Sample Date** : 8/26/99  
**Sampler** : KMB

**Report Date** : 3-Sep-99  
**ASI Project #** : 4086  
**Date Received** : 27-Aug-99  
**Sample Matrix** : Soil  
**Lab ID** : See Below  
**Sample ID** : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 18-20'	18713	3-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		4-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Naphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		3-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		4-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Nitrobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		4-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		N-Nitrosodimethylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		N-Nitrosodiphenylamine	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Pentachlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Phenanthrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		Phenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	08/30/99/1718
		2,4,5-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		2,4,6-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	08/30/99/1718
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	48.9	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	ND	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	9.42	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	ND	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	ND	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 18-20'	18713	Benzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Bromobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Bromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Bromodichloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Bromoform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Bromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		n-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		sec-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		tert-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Carbon tetrachloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Chlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Chloroethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		Chloroform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Chloromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		2-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		4-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Dibromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		1,2-Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,2-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243





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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/26/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4086  
Date Received : 27-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
1 18-20'	18713	n-Propylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Styrene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Tetrachloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Toluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		1,1,1-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,1,2-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Trichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Trichlorofluoromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		1,2,3-Trichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243
		Vinyl chloride	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1243
		Total Xylenes	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1243

ND = Concentration is less than detection limit

### Method Reference:

EPA Methods for the Chemical Analysis of Water and Wastes. March, 1983

Standard Methods for the Examination of Water and Wastewater. 19th Edition, 1995.

Test Methods for Evaluating Solid Waste. November, 1986, SW-846, 3rd Edition.

Approved By:

*John L. Babe*

Date:

*9/3/99*

## ANALYTICAL SYSTEMS, INC.

## ENVIRONMENTAL TESTING LABORATORY

P.O. BOX 19667

439 INDUSTRIAL LANE

B'HAM, AL 35219

B'HAM, AL 35211

PHONE (205) 940-7724

FAX (205) 940-7726

CHAIN OF CUSTODY  
ANALYSIS REQUEST

SEND REPORT TO:

CLIENT:		PROJECT: East Gadsden		SAMPLERS: KMB			
DATE DELIVERED:				ANALYSIS REQUESTED			
METHOD OF DELIVERY:							
LAB ID	FIELD ID	DATE/TIME COLLECTED	SAMPLE DESCRIPTION				
18710	2 5-7'	8/26/99	Soils	VOC	SVOC	PCB Metals	PCB
18711	2 18-20'	"	"	VOC	SVOC	Metals	PCB
18712	1 5-7'	"	"	VOC	SVOC	metals	No
18713	1 18-20'	"	"	VOC	SVOC	metals	No
Indicate preservative: (a) Volatiles-HCL, (b) Metals-HNO <sub>3</sub> , (c) H <sub>2</sub> SO <sub>4</sub> Sulfuric Acid, (d) CN-NaOH, (r) refrigerated at 4 degrees C. Indicate bottle type: (g) Glass, (p) Plastic, (voc) VOC Vial							
Relinquished by:		Date/Time	Received in Laboratory by:		Date/Time	Remarks:	
(signed) KMB		8/26/99	(signed) Larry Baker		8/27/99		
(print) KAREN BOYKIN		8/26/99	(print) Larry Baker		0920		
Relinquished by:		Date/Time	Received by:		Date/Time	Special Handling:	
(signed)			(signed)				
(print)			(print)				
						Invoice #	



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 5-7'	18714	Acenaphthene	4.53	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Acenaphthlene	0.619	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Anthracene	24.6	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Aniline	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Azobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzidine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzoic Acid	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Benzo(a)anthracene	2.43	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzo(b)fluoranthene	0.440	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzo(k)fluoranthene	0.613	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzo(g,h,i)perylene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzo(a)pyrene	0.360	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Benzyl alcohol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Butyl benzyl phthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		4-Chloroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		1-Chloronaphthalene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2-Chloronaphthalene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		4-Chloro-3-methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		2-Chlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Chrysene	10.4	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 5-7	18714	Dibenz(a,h)anthracene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Dibenzofuran	4.38	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Di-n-butylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		1,3-Dichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		1,4-Dichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		1,2-Dichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.7	EPA 8270	JLB	09/01/99/0925
		2,4-Dichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		2,6-Dichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Diethylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2,4-Dimethylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Dimethylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		2,4-Dinitrophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		2,4-Dinitrotoluene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2,6-Dinitrotoluene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Di-n-octylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Fluoranthene	33.2	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Fluorene	9.28	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Hexachlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Hexachlorobutadiene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Hexachlorocyclopentadiene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Hexachloroethane	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Isophorone	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2-Methylnaphthalene	1.58	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2-Methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 5-7'	18714	3-Methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		4-Methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Naphthalene	1.47	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2-Nitroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		3-Nitroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		4-Nitroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Nitrobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2-Nitrophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		4-Nitrophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		N-Nitrosodimethylamine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		N-Nitrosodiphenylamine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Pentachlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Phenanthrene	32.2	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		Phenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Pyrene	38.0	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0925
		2,4,5-Trichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		2,4,6-Trichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0925
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	78.7	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	1.73	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	61.3	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	422	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	0.161	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 5-7'	18714	Benzene	0.143	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Bromobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Bromochloromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Bromodichloromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Bromoform	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Bromomethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		n-Butylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		sec-Butylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		tert-Butylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Carbon tetrachloride	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Chlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Chloroethane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		Chloroform	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Chloromethane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		2-Chlorotoluene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		4-Chlorotoluene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Dibromochloromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		1,2-Dibromomethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Dibromomethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,2-Dichlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 5-7	18714	1,3-Dichlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,4-Dichlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Dichlorodifluoromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,1-Dichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,2-Dichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,1-Dichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		cis-1,2-Dichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		trans-1,2-Dichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,2-Dichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,3-Dichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		2,2-Dichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,1-Dichloropropene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		cis-1,3-Dichloropropene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		trans-1,3-Dichloropropene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Ethylbenzene	0.505	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Hexachlorobutadiene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		Isopropylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		4-Isopropyltoluene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Methyl-tert-butyl ether	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Methylene chloride	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Naphthalene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 5-7'	18714	n-Propylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Styrene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Tetrachloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Toluene	0.248	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		1,1,1-Trichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,1,2-Trichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Trichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Trichlorofluoromethane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		1,2,3-Trichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		Vinyl chloride	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1431
		Total Xylenes	1.37	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1431
		PCB-1016	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341
		PCB-1221	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341
		PCB-1232	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341
		PCB-1242	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341
		PCB-1248	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341
		PCB-1254	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341
		PCB-1260	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1341





# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 10-12'	18715	Acenaphthene	3.34	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Acenaphthylene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Anthracene	12.4	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Aniline	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Azobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzidine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzoic Acid	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Benzo(a)anthracene	1.67	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzo(b)fluoranthene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzo(k)fluoranthene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzo(g,h,i)perylene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzo(a)pyrene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Benzyl alcohol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Butyl benzyl phthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		4-Chloroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		1-Chloronaphthalene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2-Chloronaphthalene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		4-Chloro-3-methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		2-Chlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Chrysene	4.67	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 10-12'	18715	Dibenz(a,h)anthracene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Dibenzofuran	1.73	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Di-n-butylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		1,3-Dichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		1,4-Dichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		1,2-Dichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.7	EPA 8270	JLB	09/01/99/0958
		2,4-Dichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		2,6-Dichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Diethylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2,4-Dimethylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Dimethylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		2,4-Dinitrophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		2,4-Dinitrotoluene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2,6-Dinitrotoluene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Di-n-octylphthalate	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Fluoranthene	21.4	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Fluorene	3.77	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Hexachlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Hexachlorobutadiene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Hexachlorocyclopentadiene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Hexachloroethane	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Isophorone	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2-Methylnaphthalene	0.806	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2-Methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 10-12'	18715	3-Methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		4-Methylphenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Naphthalene	2.41	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2-Nitroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		3-Nitroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		4-Nitroaniline	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Nitrobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2-Nitrophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		4-Nitrophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		N-Nitrosodimethylamine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		N-Nitrosodiphenylamine	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Pentachlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Phenanthrene	17.0	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		Phenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Pyrene	25.9	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.35	EPA 8270	JLB	09/01/99/0958
		2,4,5-Trichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		2,4,6-Trichlorophenol	ND	mg/Kg	1.75	EPA 8270	JLB	09/01/99/0958
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	64.4	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	1.17	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	87.3	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	571	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	0.106	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 10-12'	18715	Benzene	0.135	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Bromobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Bromochloromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Bromodichloromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Bromoform	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Bromomethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		n-Butylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		sec-Butylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		tert-Butylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Carbon tetrachloride	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Chlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Chloroethane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		Chloroform	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Chloromethane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		2-Chlorotoluene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		4-Chlorotoluene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Dibromochloromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		1,2-Dibromomethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Dibromomethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,2-Dichlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 10-12'	18715	1,3-Dichlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,4-Dichlorobenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Dichlorodifluoromethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,1-Dichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,2-Dichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,1-Dichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		cis-1,2-Dichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		trans-1,2-Dichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,2-Dichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,3-Dichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		2,2-Dichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,1-Dichloropropene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		cis-1,3-Dichloropropene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		trans-1,3-Dichloropropene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Ethylbenzene	0.306	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Hexachlorobutadiene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		Isopropylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		4-Isopropyltoluene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Methyl-tert-butyl ether	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Methylene chloride	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Naphthalene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B3 10-12'	18715	n-Propylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Styrene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Tetrachloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Toluene	0.255	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		1,1,1-Trichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,1,2-Trichloroethane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Trichloroethene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Trichlorofluoromethane	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		1,2,3-Trichloropropane	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		Vinyl chloride	ND	mg/Kg	0.250	EPA 8260	JLB	09/02/99/1503
		Total Xylenes	0.736	mg/Kg	0.125	EPA 8260	JLB	09/02/99/1503
		PCB-1016	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413
		PCB-1221	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413
		PCB-1232	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413
		PCB-1242	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413
		PCB-1248	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413
		PCB-1254	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413
		PCB-1260	ND	mg/Kg	0.4	EPA 8081	JLB	09/01/99/1413



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## Laboratory Report

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Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 0-2'	18716	Acenaphthene	0.079	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Acenaphthylene	0.182	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Anthracene	0.802	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Aniline	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Azobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzidine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzoic Acid	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Benzo(a)anthracene	0.233	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzo(b)fluoranthene	0.043	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzo(k)fluoranthene	0.074	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzo(g,h,i)perylene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzo(a)pyrene	0.062	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Benzyl alcohol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Butyl benzyl phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		4-Chloroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		1-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		4-Chloro-3-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		2-Chlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Chrysene	0.647	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 0-2'	18716	Dibenz(a,h)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Dibenzofuran	0.062	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Di-n-butylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		1,3-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		1,4-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		1,2-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.070	EPA 8270	JLB	09/01/99/1103
		2,4-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		2,6-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Diethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2,4-Dimethylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Dimethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		2,4-Dinitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		2,4-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2,6-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Di-n-octylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Fluoranthene	2.20	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Fluorene	0.212	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Hexachlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Hexachlorobutadiene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Hexachlorocyclopentadiene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Hexachloroethane	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Isophorone	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2-Methylnaphthalene	0.060	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103





# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 0-2'	18716	3-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		4-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Naphthalene	0.056	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		3-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		4-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Nitrobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		4-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		N-Nitrosodimethylamine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		N-Nitrosodiphenylamine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Pentachlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Phenanthrene	1.34	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		Phenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Pyrene	2.83	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1103
		2,4,5-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		2,4,6-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1103
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	109	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	ND	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	11.2	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	53.1	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	ND	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



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## Laboratory Report

Client : Qore Property Sciences  
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Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 0-2'	18716	Benzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Bromobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Bromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Bromodichloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Bromoform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Bromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		n-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		sec-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		tert-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Carbon tetrachloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Chlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Chloroethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		Chloroform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Chloromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		2-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		4-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Dibromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		1,2-Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,2-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 0-2'	18716	1,3-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,4-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Dichlorodifluoromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,1-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,2-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,1-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		cis-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		trans-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,3-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		2,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,1-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		cis-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		trans-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Ethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Hexachlorobutadiene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		Isopropylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		4-Isopropyltoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Methyl-tert-butyl ether	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Methylene chloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Naphthalene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 0-2'	18716	n-Propylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Styrene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Tetrachloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Toluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		1,1,1-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,1,2-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Trichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Trichlorofluoromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		1,2,3-Trichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		Vinyl chloride	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1357
		Total Xylenes	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1357
		PCB-1016	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442
		PCB-1221	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442
		PCB-1232	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442
		PCB-1242	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442
		PCB-1248	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442
		PCB-1254	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442
		PCB-1260	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1442



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## Laboratory Report

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Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7'	18717	Acenaphthene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Acenaphthlene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Aniline	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Azobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzdine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzoic Acid	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Benzo(a)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzo(b)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzo(k)fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzo(g,h,i)perylene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzo(a)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Benzyl alcohol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Bis(2-chloroethoxy)methane	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Bis(2-chloroethyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Bis(2-chloroethoxy)ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		4-Bromophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Butyl benzyl phthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		4-Chloroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		1-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2-Chloronaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		4-Chloro-3-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		2-Chlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		4-Chlorophenyl phenyl ether	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Chrysene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138



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## Laboratory Report

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Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7'	18717	Dibenz(a,h)anthracene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Dibenzofuran	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Di-n-butylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		1,3-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		1,4-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		1,2-Dichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		3,3'-Dichlorobenzidine	ND	mg/Kg	0.070	EPA 8270	JLB	09/01/99/1138
		2,4-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		2,6-Dichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Diethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2,4-Dimethylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Dimethylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		2,4-Dinitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		2,4-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2,6-Dinitrotoluene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Di-n-octylphthalate	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Fluoranthene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Fluorene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Hexachlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Hexachlorobutadiene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Hexachlorocyclopentadiene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Hexachloroethane	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Isophorone	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2-Methylnaphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 8/27/99  
Sampler : KMB

Report Date : 3-Sep-99  
ASI Project # : 4087  
Date Received : 30-Aug-99  
Sample Matrix : Soil  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7	18717	3-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		4-Methylphenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Naphthalene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		3-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		4-Nitroaniline	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Nitrobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		4-Nitrophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		N-Nitrosodimethylamine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		N-Nitrosodi-n-propylamine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		N-Nitrosodiphenylamine	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Pentachlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Phenanthrene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		Phenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Pyrene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.035	EPA 8270	JLB	09/01/99/1138
		2,4,5-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		2,4,6-Trichlorophenol	ND	mg/Kg	0.175	EPA 8270	JLB	09/01/99/1138
		Arsenic	ND	mg/Kg	1.0	EPA 7060	MRH	09/01/99/1110
		Barium	119	mg/Kg	5.0	EPA 7080	JLB	09/01/99/1744
		Cadmium	ND	mg/Kg	1.0	EPA 7130	MRH	09/01/99/1022
		Chromium	12.9	mg/Kg	5.0	EPA 7190	MRH	09/01/99/1311
		Lead	33.1	mg/Kg	5.0	EPA 7420	MRH	09/01/99/1439
		Mercury	ND	mg/Kg	0.1	EPA 7470	JLB	09/01/99/0745
		Selenium	ND	mg/Kg	1.0	EPA 7740	JLB	09/01/99/1646
		Silver	ND	mg/Kg	5.0	EPA 7760	MRH	09/01/99/0940



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

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Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7'	18717	Benzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Bromobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Bromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Bromodichloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Bromoform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Bromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		n-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		sec-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		tert-Butylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Carbon tetrachloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Chlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Chloroethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		Chloroform	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Chloromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		2-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		4-Chlorotoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Dibromochloromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,2-Dibromo-3-Chloropropane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		1,2-Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Dibromomethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,2-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323





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Birmingham, Alabama 35222  
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Sampler : KMB

Report Date : 3-Sep-99  
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Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7'	18717	1,3-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,4-Dichlorobenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Dichlorodifluoromethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,1-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,2-Dichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,1-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		cis-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		trans-1,2-Dichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,3-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		2,2-Dichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,1-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		cis-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		trans-1,3-Dichloropropene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Ethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Hexachlorobutadiene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		Isopropylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		4-Isopropyltoluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Methyl-tert-butyl ether	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Methylene chloride	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Naphthalene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323



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Page 24 of 25

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Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7'	18717	n-Propylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Styrene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Tetrachloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Toluene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,2,3-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		1,2,4-Trichlorobenzene	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		1,1,1-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,1,2-Trichloroethane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Trichloroethene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Trichlorofluoromethane	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		1,2,3-Trichloropropane	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,2,4-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		1,3,5-Trimethylbenzene	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323
		Vinyl chloride	ND	mg/Kg	0.010	EPA 8260	JLB	09/02/99/1323
		Total Xylenes	ND	mg/Kg	0.005	EPA 8260	JLB	09/02/99/1323



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Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
B4 5-7'	18717	PCB-1016	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512
		PCB-1221	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512
		PCB-1232	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512
		PCB-1242	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512
		PCB-1248	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512
		PCB-1254	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512
		PCB-1260	ND	mg/Kg	0.04	EPA 8081	JLB	09/01/99/1512

ND = Concentration is less than detection limit

### Method Reference:

EPA Methods for the Chemical Analysis of Water and Wastes. March, 1983

Standard Methods for the Examination of Water and Wastewater. 19th Edition, 1995.

Test Methods for Evaluating Solid Waste. November, 1986, SW-846, 3rd Edition.

Approved By:

*John L. Baker*

Date:

*9/3/99*

## ANALYTICAL SYSTEMS, INC.

## ENVIRONMENTAL TESTING LABORATORY

P.O. BOX 19667

439 INDUSTRIAL LANE

B'HAM, AL 35219

B'HAM, AL 35211

PHONE (205) 940-7724

FAX (205) 940-7726

## CHAIN OF CUSTODY

## ANALYSIS REQUEST

SEND REPORT TO:

CLIENT: <b>PORE</b>			PROJECT: <b>East Gadsden</b>			SAMPLERS: <b>Idolleg</b>		
DATE DELIVERED:				ANALYSIS REQUESTED				
METHOD OF DELIVERY:								
LAB ID	FIELD ID	DATE/TIME COLLECTED	SAMPLE DESCRIPTION					
<b>B 18714</b>	<b>B3 5-7</b>	<b>8/27/99 11am</b>	<b>SOIL</b>	<b>PERA Metals</b>	<b>PCB</b>	<b>VOC</b>	<b>SVOC</b>	
<b>18715</b>	<b>B3 10-12</b>	<b>" 1105</b>	<b>SOIL</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>18716</b>	<b>B4 0-2</b>	<b>" 1300</b>	<b>SOIL</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
<b>18717</b>	<b>B4 5-7</b>	<b>" 1310</b>	<b>SOIL</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	
Indicate preservative: (a) Volatiles-HCL, (b) Metals-HNO3, (c) H2SO4 Sulfuric Acid, (d) CN-NaOH, (r) refrigerated at 4 degrees C. Indicate bottle type: (g) Glass, (p) Plastic, (voc) VOC Vial								
Relinquished by:		Date/Time	Received in Laboratory by:		Date/Time	Remarks:		
(signed) <b>Karen Proven</b>		<b>8/29/99 1230P</b>	(signed) <b>Larry Baker</b>		<b>8/31/99 1230P</b>			
(print) <b>KAREN PROVEN</b>		<b>8/29/99 1230P</b>	(print) <b>Larry Baker</b>		<b>8/31/99 1230P</b>	Special Handling:		
Relinquished by:		Date/Time	Received by:		Date/Time	Invoice #		
(signed)			(signed)					
(print)			(print)					



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-1	18718	Acenaphthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Acenaphthlene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Aniline	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Azobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzidine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzoic Acid	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Benzo(a)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzo(b)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzo(k)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzo(g,h,i)perylene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzo(a)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Benzyl alcohol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Bis(2-chloroethoxy)methane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Bis(2-chloroethyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Bis(2-chloroethoxy)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Bis(2-chloroisopropyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Bis(2-ethylhexyl)phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		4-Bromophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Butyl benzyl phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		4-Chloroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		1-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		2-Chlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		4-Chlorophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Chrysene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941



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Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-1	18718	Dibenz(a,h)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Dibenzofuran	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Di-n-butylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		1,3-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		1,4-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		1,2-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		3,3'-Dichlorobenzidine	ND	ug/L	2.0	EPA 8270	JLB	09/08/99/0941
		2,4-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		2,6-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Diethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2,4-Dimethylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Dimethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		4,6-Dinitro-2-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		2,4-Dinitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		2,4-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2,6-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Di-n-octylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Fluorene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Hexachlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Hexachlorobutadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Hexachlorocyclopentadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Hexachloroethane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Isophorone	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2-Methylnaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941



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Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-1	18718	3-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		4-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Naphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		3-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		4-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Nitrobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		4-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		N-Nitrosodimethylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		N-Nitrosodi-n-propylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		N-Nitrosodiphenylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Pentachlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Phenanthrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		Phenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		1,2,4-Trichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/0941
		2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/0941
		Arsenic	ND	mg/L	0.005	EPA 206.2	MRH	09/08/99/1155
		Barium	ND	mg/L	0.02	EPA 208.1	JLB	09/07/99/1612
		Cadmium	ND	mg/L	0.01	EPA 213.1	MRH	09/08/99/1030
		Chromium	ND	mg/L	0.02	EPA 218.1	MRH	09/08/99/1134
		Lead	ND	mg/L	0.002	EPA 239.2	MRH	09/08/99/1050
		Mercury	ND	mg/L	0.002	EPA 245.1	JLB	09/08/99/0740
		Selenium	ND	mg/L	0.01	EPA 270.2	JLB	09/07/99/1711
		Silver	ND	mg/L	0.02	EPA 272.1	MRH	09/08/99/1108



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-1	18718	1,3-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,4-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Dichlorodifluoromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,1-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,2-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,1-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		cis-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		trans-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,3-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		2,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,1-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		cis-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		trans-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Ethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Hexachlorobutadiene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1510
		Isopropylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		4-Isopropyltoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Methyl-tert-butyl ether	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Methylene chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Naphthalene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1510





# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-1	18718	n-Propylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Styrene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Tetrachloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Toluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,2,3-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1510
		1,2,4-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1510
		1,1,1-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,1,2-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Trichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Trichlorofluoromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1510
		1,2,3-Trichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,2,4-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		1,3,5-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Vinyl chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510
		Total Xylenes	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1510



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-2	18719	Acenaphthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Acenaphthlene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Aniline	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Azobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benidine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benzoic Acid	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Benzo(a)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benzo(b)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benzo(k)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benzo(g,h,i)perylene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benzo(a)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Benzyl alcohol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Bis(2-chloroethoxy)methane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Bis(2-chloroethyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Bis(2-chloroethoxy)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Bis(2-chloroisopropyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Bis(2-ethylhexyl)phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		4-Bromophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Butyl benzyl phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		4-Chloroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		1-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		2-Chlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		4-Chlorophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Chrysene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-2	18719	Dibenz(a,h)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Dibenzofuran	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Di-n-butylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		1,3-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		1,4-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		1,2-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		3,3'-Dichlorobenzidine	ND	ug/L	2.0	EPA 8270	JLB	09/08/99/1015
		2,4-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		2,6-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Diethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2,4-Dimethylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Dimethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		4,6-Dinitro-2-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		2,4-Dinitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		2,4-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2,6-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Di-n-octylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Fluorene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Hexachlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Hexachlorobutadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Hexachlorocyclopentadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Hexachloroethane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Isophorone	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2-Methylnaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-2	18719	3-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		4-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Naphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		3-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		4-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Nitrobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		4-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		N-Nitrosodimethylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		N-Nitrosodi-n-propylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		N-Nitrosodiphenylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Pentachlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Phenanthrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		Phenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		1,2,4-Trichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1015
		2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1015
		Arsenic	ND	mg/L	0.01	EPA 206.2	MRH	09/08/99/1155
		Barium	0.079	mg/L	0.02	EPA 208.1	JLB	09/07/99/1612
		Cadmium	ND	mg/L	0.01	EPA 213.1	MRH	09/08/99/1030
		Chromium	ND	mg/L	0.02	EPA 218.1	MRH	09/08/99/1134
		Lead	ND	mg/L	0.002	EPA 239.2	MRH	09/08/99/1050
		Mercury	ND	mg/L	0.002	EPA 245.1	JLB	09/08/99/0740
		Selenium	ND	mg/L	0.01	EPA 270.2	JLB	09/07/99/1711
		Silver	ND	mg/L	0.02	EPA 272.1	MRH	09/08/99/1108



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-2	18719	Benzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Bromobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Bromochloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Bromodichloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Bromoform	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Bromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		n-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		sec-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		tert-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Carbon tetrachloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Chlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Chloroethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		Chloroform	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Chloromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		2-Chlorotoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		4-Chlorotoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Dibromochloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		1,2-Dibromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Dibromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,2-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439



# Analytical Systems, Inc.

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## Laboratory Report

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3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-2	18719	1,3-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,4-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Dichlorodifluoromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,1-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,2-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,1-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		cis-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		trans-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,3-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		2,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,1-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		cis-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		trans-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Ethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Hexachlorobutadiene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		Isopropylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		4-Isopropyltoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Methyl-tert-butyl ether	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Methylene chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Naphthalene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-2	18719	n-Propylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Styrene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Tetrachloroethene	14.2	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Toluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,2,3-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		1,2,4-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		1,1,1-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,1,2-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Trichloroethene	3.67	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Trichlorofluoromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1439
		1,2,3-Trichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,2,4-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		1,3,5-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Vinyl chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		Total Xylenes	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1439
		PCB-1016	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319
		PCB-1221	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319
		PCB-1232	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319
		PCB-1242	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319
		PCB-1248	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319
		PCB-1254	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319
		PCB-1260	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1319



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-3	18720	Acenaphthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Acenaphthlene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Aniline	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Azobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzidine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzoic Acid	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Benzo(a)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzo(b)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzo(k)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzo(g,h,i)perylene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzo(a)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Benzyl alcohol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Bis(2-chloroethoxy)methane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Bis(2-chloroethyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Bis(2-chloroethoxy)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Bis(2-chloroisopropyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Bis(2-ethylhexyl)phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		4-Bromophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Butyl benzyl phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		4-Chloroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		1-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		2-Chlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		4-Chlorophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Chrysene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047





# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222

Client Project # : East Gadsden

Sample Date : 9/2/99

Sampler : JJ/KB

Report Date : 8-Sep-99

ASI Project # : 4088

Date Received : 3-Sep-99

Sample Matrix : Water

Lab ID : See Below

Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-3	18720	Dibenz(a,h)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Dibenzofuran	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Di-n-butylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		1,3-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		1,4-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		1,2-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		3,3'-Dichlorobenzidine	ND	ug/L	2.0	EPA 8270	JLB	09/08/99/1047
		2,4-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		2,6-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Diethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2,4-Dimethylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Dimethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		4,6-Dinitro-2-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		2,4-Dinitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		2,4-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2,6-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Di-n-octylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Fluorene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Hexachlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Hexachlorobutadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Hexachlorocyclopentadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Hexachloroethane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Isophorone	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2-Methylnaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-3	18720	3-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		4-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Naphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		3-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		4-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Nitrobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		4-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		N-Nitrosodimethylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		N-Nitrosodi-n-propylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		N-Nitrosodiphenylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Pentachlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Phenanthrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		Phenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		1,2,4-Trichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1047
		2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1047
		Arsenic	ND	mg/L	0.01	EPA 206.2	MRH	09/08/99/1155
		Barium	0.045	mg/L	0.02	EPA 208.1	JLB	09/07/99/1612
		Cadmium	ND	mg/L	0.01	EPA 213.1	MRH	09/08/99/1030
		Chromium	ND	mg/L	0.02	EPA 218.1	MRH	09/08/99/1134
		Lead	ND	mg/L	0.002	EPA 239.2	MRH	09/08/99/1050
		Mercury	ND	mg/L	0.002	EPA 245.1	JLB	09/08/99/0740
		Selenium	ND	mg/L	0.01	EPA 270.2	JLB	09/07/99/1711
		Silver	ND	mg/L	0.02	EPA 272.1	MRH	09/08/99/1108



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-3	18720	Benzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Bromobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Bromochloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Bromodichloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Bromoform	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Bromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		n-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		sec-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		tert-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Carbon tetrachloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Chlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Chloroethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		Chloroform	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Chloromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		2-Chlorotoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		4-Chlorotoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Dibromochloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		1,2-Dibromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Dibromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,2-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-3	18720	1,3-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,4-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Dichlorodifluoromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,1-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,2-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,1-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		cis-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		trans-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,3-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		2,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,1-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		cis-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		trans-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Ethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Hexachlorobutadiene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		Isopropylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		4-Isopropyltoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Methyl-tert-butyl ether	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Methylene chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Naphthalene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541



# Analytical Systems, Inc.

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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-3	18720	n-Propylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Styrene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Tetrachloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Toluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,2,3-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		1,2,4-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		1,1,1-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,1,2-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Trichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Trichlorofluoromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1541
		1,2,3-Trichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,2,4-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		1,3,5-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Vinyl chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		Total Xylenes	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1541
		PCB-1016	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352
		PCB-1221	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352
		PCB-1232	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352
		PCB-1242	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352
		PCB-1248	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352
		PCB-1254	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352
		PCB-1260	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1352



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
(205)940-7724 Fax(205)940-7726

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	Acenaphthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Acenaphthlene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Aniline	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Azobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzidine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzoic Acid	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Benzo(a)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzo(b)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzo(k)fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzo(g,h,i)perylene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzo(a)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Benzyl alcohol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Bis(2-chloroethoxy)methane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Bis(2-chloroethyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Bis(2-chloroethoxy)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Bis(2-chloroisopropyl)ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Bis(2-ethylhexyl)phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		4-Bromophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Butyl benzyl phthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		4-Chloroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		1-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2-Chloronaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		4-Chloro-3-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		2-Chlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		4-Chlorophenyl phenyl ether	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Chrysene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124



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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	Dibenz(a,h)anthracene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Dibenzofuran	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Di-n-butylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		1,3-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		1,4-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		1,2-Dichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		3,3'-Dichlorobenzidine	ND	ug/L	2.0	EPA 8270	JLB	09/08/99/1124
		2,4-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		2,6-Dichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Diethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2,4-Dimethylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Dimethylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		4,6-Dinitro-2-methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		2,4-Dinitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		2,4-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2,6-Dinitrotoluene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Di-n-octylphthalate	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Fluoranthene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Fluorene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Hexachlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Hexachlorobutadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Hexachlorocyclopentadiene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Hexachloroethane	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Indeno(1,2,3-cd)pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Isophorone	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2-Methylnaphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	3-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		4-Methylphenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Naphthalene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		3-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		4-Nitroaniline	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Nitrobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		4-Nitrophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		N-Nitrosodimethylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		N-Nitrosodi-n-propylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		N-Nitrosodiphenylamine	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Pentachlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Phenanthrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		Phenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Pyrene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		1,2,4-Trichlorobenzene	ND	ug/L	1.0	EPA 8270	JLB	09/08/99/1124
		2,4,5-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		2,4,6-Trichlorophenol	ND	ug/L	5.0	EPA 8270	JLB	09/08/99/1124
		Arsenic	ND	mg/L	0.01	EPA 206.2	MRH	09/08/99/1155
		Barium	ND	mg/L	0.02	EPA 208.1	JLB	09/07/99/1612
		Cadmium	ND	mg/L	0.01	EPA 213.1	MRH	09/08/99/1030
		Chromium	ND	mg/L	0.02	EPA 218.1	MRH	09/08/99/1134
		Lead	ND	mg/L	0.002	EPA 239.2	MRH	09/08/99/1050
		Mercury	ND	mg/L	0.002	EPA 245.1	JLB	09/08/99/0740
		Selenium	ND	mg/L	0.01	EPA 270.2	JLB	09/07/99/1711
		Silver	ND	mg/L	0.02	EPA 272.1	MRH	09/08/99/1108





# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
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Page 22 of 25

## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	Benzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Bromobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Bromochloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Bromodichloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Bromoform	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Bromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		n-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		sec-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		tert-Butylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Carbon tetrachloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Chlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Chloroethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		Chloroform	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Chloromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		2-Chlorotoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		4-Chlorotoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Dibromochloromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		1,2-Dibromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Dibromomethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,2-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609



# Analytical Systems, Inc.

439 Industrial Lane P.O. Box 19667  
Birmingham, Alabama 35219  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	1,3-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,4-Dichlorobenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Dichlorodifluoromethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,1-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,2-Dichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,1-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		cis-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		trans-1,2-Dichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,3-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		2,2-Dichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,1-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		cis-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		trans-1,3-Dichloropropene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Ethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Hexachlorobutadiene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		Isopropylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		4-Isopropyltoluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Methyl-tert-butyl ether	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Methylene chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Naphthalene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609



# Analytical Systems, Inc.

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Birmingham, Alabama 35219  
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## Laboratory Report

Client : Qore Property Sciences  
3608 7th Ct. South  
Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	n-Propylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Styrene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Tetrachloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Toluene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,2,3-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		1,2,4-Trichlorobenzene	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		1,1,1-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,1,2-Trichloroethane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Trichloroethene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Trichlorofluoromethane	ND	ug/L	5.0	EPA 8260	JLB	09/03/99/1609
		1,2,3-Trichloropropane	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,2,4-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		1,3,5-Trimethylbenzene	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Vinyl chloride	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609
		Total Xylenes	ND	ug/L	2.0	EPA 8260	JLB	09/03/99/1609



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## Laboratory Report

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Birmingham, Alabama 35222  
Client Project # : East Gadsden  
Sample Date : 9/2/99  
Sampler : JJ/KB

Report Date : 8-Sep-99  
ASI Project # : 4088  
Date Received : 3-Sep-99  
Sample Matrix : Water  
Lab ID : See Below  
Sample ID : See Below

Sample ID	Lab ID	Parameter	Results	Units	Detection Limit	Method	Analyst	Date/Time Analyzed
MW-4	18721	PCB-1016	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421
		PCB-1221	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421
		PCB-1232	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421
		PCB-1242	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421
		PCB-1248	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421
		PCB-1254	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421
		PCB-1260	ND	ug/L	1.0	EPA 8081	JLB	09/08/99/1421

ND = Concentration is less than detection limit

### Method Reference:

EPA Methods for the Chemical Analysis of Water and Wastes. March, 1983

Standard Methods for the Examination of Water and Wastewater. 19th Edition, 1995.

Test Methods for Evaluating Solid Waste. November, 1986, SW-846, 3rd Edition.

Approved By:

*John L. Baker*

Date:

*9/8/99*

**ANALYTICAL SYSTEMS, INC.**  
**ENVIRONMENTAL TESTING LABORATORY**  
P.O. BOX 19667 439 INDUSTRIAL LANE  
B'HAM, AL 35219 B'HAM, AL 35211  
PHONE (205) 940-7724 FAX (205) 940-7726

**CHAIN OF CUSTODY  
ANALYSIS REQUEST**

SEND REPORT TO:

*DORE Property Sciences*  
3608 7th CT S  
Birmingham, AL 35222

<b>CLIENT:</b> <i>City of Gadsden</i>		<b>PROJECT:</b> <i>East Gadsden</i>		<b>SAMPLERS:</b> <i>John Tolk</i> <i>Karen Boykin</i>			
<b>DATE DELIVERED:</b> <i>9/3/99</i>				<b>ANALYSIS REQUESTED</b>			
<b>METHOD OF DELIVERY:</b> <i>Courier</i>							
LAB ID	FIELD ID	DATE/TIME COLLECTED	SAMPLE DESCRIPTION	PCBs	VOCs	S-VOCs	8 PCRA Metals
<i>18788</i>	<i>MW1</i>	<i>9-2-99 18:40</i>	<i>water</i>		<i>X</i>	<i>X</i>	<i>X</i>
<i>18789</i>	<i>MW2</i>	<i>9-2-99 18:40</i>	<i> </i>	<i>X</i>	<i> </i>	<i> </i>	<i> </i>
<i>18790</i>	<i>MW3</i>	<i>9-2-99 17:55</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>
<i>18791</i>	<i>MW4</i>	<i>9-2-99 17:13</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>
Indicate preservative: (a) Volatiles-HCL, (b) Metals-HNO3, (c) H2SO4 Sulfuric Acid, (d) CN-NaOH, (r) refrigerated at 4 degrees C. Indicate bottle type: (g) Glass, (p) Plastic, (voc) VOC Vial				<i>g R</i>	<i>a, g, R VOC</i>	<i>g R</i>	<i>P R B</i>
Relinquished by: <i>[Signature]</i>		Date/Time	Received in Laboratory by: <i>[Signature]</i>		Date/Time	Remarks:	
(signed)			(signed)		<i>9/3/99</i>		
(print) <i>John D. Tolk</i>			(print) <i>Larry Baker</i>		<i>1155</i>		
Relinquished by:		Date/Time	Received by:		Date/Time	Special Handling:	
(signed)			(signed)				
(print)			(print)				
						Invoice #	

**ATTACHMENT 12**



**View of East Gadsden Site from SE corner facing NW**



**View of East Gadsden Site from bridge on Broad Street facing S/SE**



**View of East Gadsden Site from bridge on Broad Street facing S/SW**



**View of east slew at East Gadsden Site  
facing W/SW**



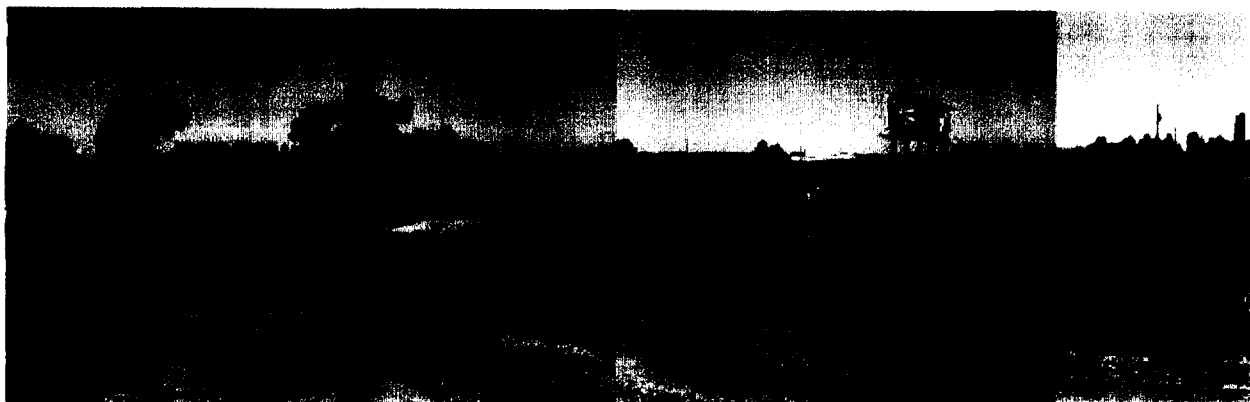
**View of west slew at East Gadsden Site  
facing SW**



View of slew at East Gadsden Site from  
west bank of Coosa River



View of pond at East Gadsden Site from  
south side of property



View of west end of pond and west end of  
East Gadsden Site



2PA  
SITE: GADSDEN  
E. 1.8  
OTHER: Vol 1

## ***PA Scoresheets***

Site Name: East Gadsden Dev. Project Site

CERCLIS ID No.: \_\_\_\_\_

Street Address: Broad Street and Hood Ave

City/State/Zip: Gadsden, Alabama

Investigator: Kenneth L. Prestridge

Agency/Organization: ADEM/Site Assessment Unit

Street Address: 1400 Coliseum Blvd

City/State/Zip: Montgomery, Alabama

Date: May 19, 2000

## **INSTRUCTIONS FOR SCORESHEETS**

### **Introduction**

This scoresheets package functions as a self-contained workbook providing all of the basic tools to apply collected data and calculate a PA score. Note that a computerized scoring tool, "PA-Scare," is also available from EPA (Office of Solid Waste and Emergency Response, Directive 9345.1-11). The scoresheets provide space to:

- Record information collected during the PA
- Indicate references to support information
- Select and assign values ("scores") for factors
- Calculate Pathway scores
- Calculate the site score

Do not enter values or scores in shaded areas of the scoresheets. You are encouraged to write notes on the scoresheets and especially on the Criteria Lists. On scoresheets with a reference column, indicate a number corresponding to attached sources of information or pages containing rationale for hypotheses; attach to the scoresheets a numbered list of these references. Evaluate all four pathways. Complete all Criteria Lists, scoresheets, and tables. Show calculations, as appropriate. If scoresheets are photocopy reproduced, copy and submit the numbered pages (right-side pages) only.

### **GENERAL INFORMATION**

**Site Description and Operational History:** Briefly describe the site and its operating history. Provide the site name, owner/operator, type of facility and operations, size of property, active or inactive status, and years of waste generation. Summarize waste treatment, storage, or disposal activities that have or may have occurred at the site: note also if these activities are documented or alleged. Identity probable source types and prior spills. Summarize highlights of previous investigations.

**Probable Substances of Concern:** List hazardous substances that have or may have been stored, handled, or disposed at the site, based on your knowledge of site operations. Identify the sources to which the substances may be related. Summarize any existing analytical data concerning hazardous substances detected on-site, in releases from the site, or at targets.

## GENERAL INFORMATION

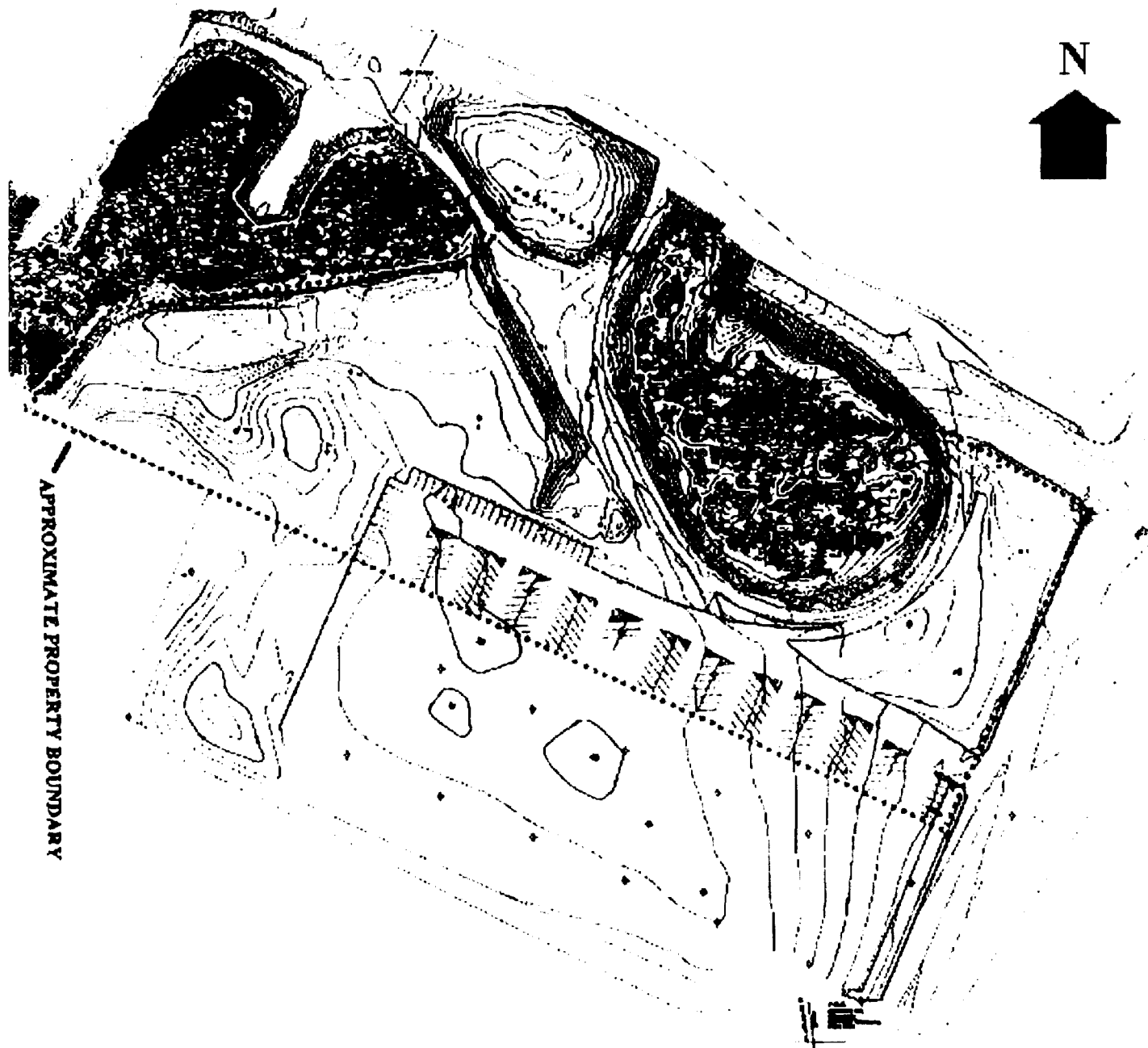
**Site Description and Operational History:** The East Gadsden Development Project Site is located in Etowah County in the town of Gadsden, Alabama -- Township 12 South, Range 6 East; Section 10, NW¼, NW¼; at 34° 00' 31.38" North Latitude and 85° 59' 46.56" West Longitude. The site consists of mostly undeveloped property with a pond and boat landing/slew located on the property. The rest of the property consists of paved parking lot area attached to the K Mart located just south of the property. The site is a 6.34 acre wooded lot located in East Gadsden, AL. The site is in an urban/commercial area with light industry and commercial concerns surrounding the property. The site is set for redevelopment by the city of Gadsden. Heavy wooded land comprises the western portion of the site and grassed and paved land comprises the eastern portion of the site. A slew and pond are located in the north and western portion of the site. There are no structures on the site. A part of the southern portion of the site has been paved and is being used as part of the parking lot of the K Mart located to the south of the property. Parts of the site have been historically occupied by a used car lot; an auto painting facility; a gas station; a clay pipe manufacturing facility; and a railway spur line to a lumber company located at the site of the K Mart shopping center. The site is bound by the Coosa River to the west, Broad Street to the north, Hood Avenue to the east, and the K Mart shopping center parking lot to the south. The City of Gadsden is working with the Ford dealership to build a new car dealership facility at this site. The present plans call for draining the pond, dredging the pond bottom, then backfilling and building the site up to the level of Hood Avenue. After building the site up (approximately 5 to 15 foot of fill material throughout the site), the facility buildings would be constructed. There is presently no fence around the site. Minimal contact would be expected by the general public; although, workers or trespassers could have access to the site .

### **Probable Substances of Concern: (Previous investigations, analytical data)**

Some Volatile, Semi-Volatile materials, and metals (ie. Barium, Lead, Tetrachloroethene, Trichloroethene, Anthracene, Chrysene, and Benzene). The City of Gadsden had a consultant perform an Phase I and II assessment of the site. It was during the Phase II investigation that the contaminants were found. In addition, ADEM personnel performed XRF soil screening at 21 locations at the site. No results of any significance were found during the soil screening.

## GENERAL INFORMATION (continued)

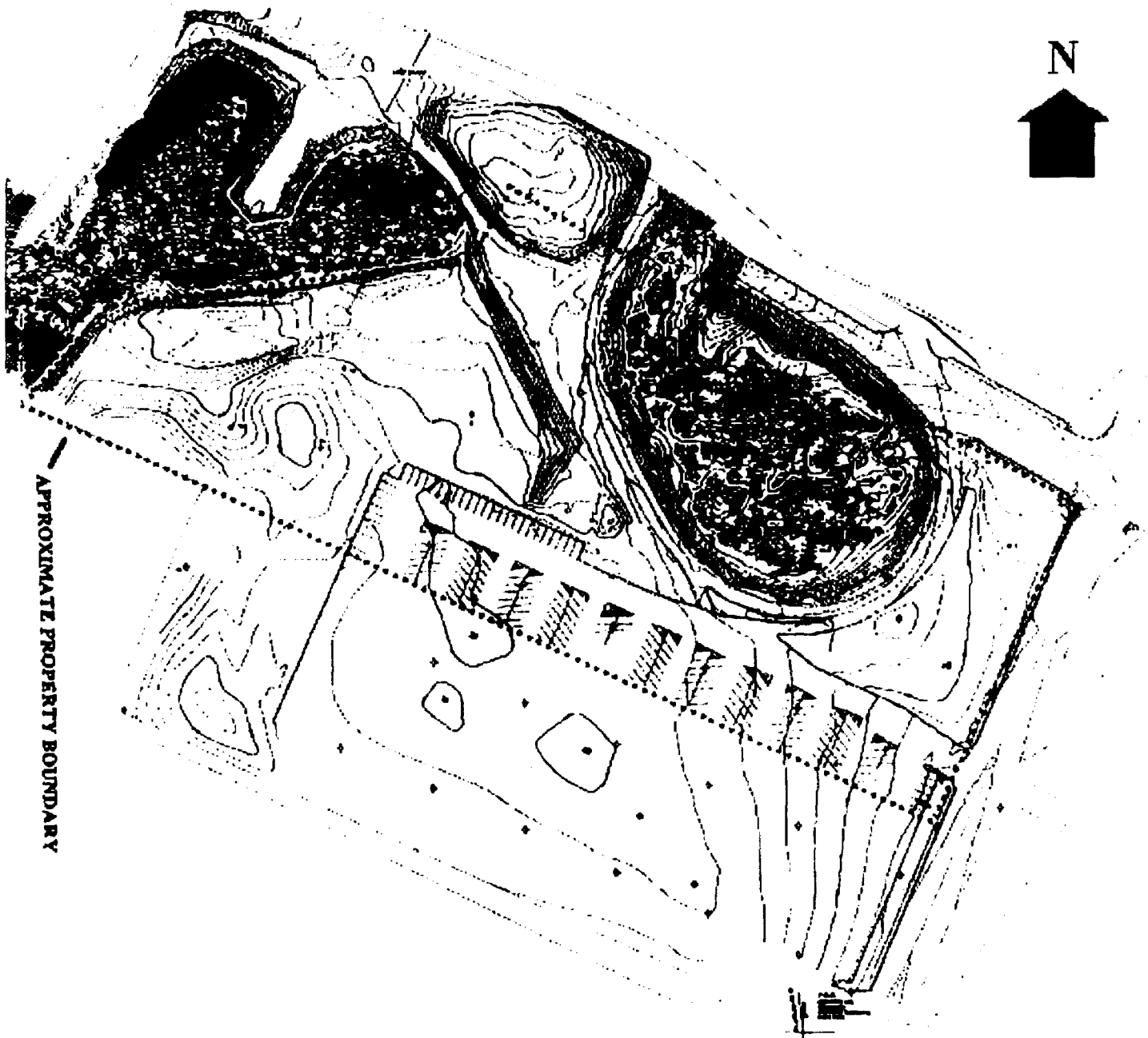
**Site Sketch:** Prepare a sketch of the site (freehand is acceptable). Indicate all pertinent features of the site and nearby environs, including: waste sources, buildings, residences, access roads, parking areas, drainage patterns, water bodies, vegetation, wells, sensitive environments, etc.



## GENERAL INFORMATION (continued)

### Site Sketch:

(Show all pertinent features, indicate sources and closest targets, indicate north)



## SOURCE EVALUATION

- Number and name each source (e.g., 1. East Drum Storage Area, 2. Sludge Lagoon, 3. Battery Pile).
- Identify source type according to the list below.
- Describe the physical character of each source (e.g., dimensions, contents, waste types, containment, operating history).
- Show waste quantity (WQ) calculations for each source for appropriate tiers. Refer to instructions opposite page 5 and PA Tables 1a and 1b. Identify waste quantity tier and waste characteristics (WC) factor category score (for a site with a single source, according to PA Table 1a). Determine WC from PA Table 1b for the sum of source WQ for a multiple-source site.
- Attach additional sheets if necessary.,
- Determine the site WC factor category score and record at the bottom of the page.

### Source Type Description

**Landfill:** an engineered (by excavation or construction) or natural hole in the ground into which wastes have been disposed by backfilling, or by contemporaneous soil deposition with waste disposal, covering wastes from view.

**Surface impoundment:** a topographic depression, excavation, or diked area, primarily formed from earthen materials (lined or unlined) and designed to hold accumulated liquid wastes, wastes containing free liquids, or sludges that were not backfilled or otherwise covered during periods of deposition; depression may be dry if deposited liquid has evaporated, volatilized or leached, or wet with exposed liquid; structures that may be more specifically described as lagoon pond, aeration pit, settling pond, tailings pond, sludge pit, etc.: also a surface impoundment that has been covered with soil after the final deposition of waste materials (i.e., buried or backfilled).

**Drums:** portable containers designed to hold a standard 55-gallon volume of wastes.

**Tanks and Non-Drum Containers:** any stationary device, designed to contain accumulated wastes, constructed primarily of fabricated materials (such as wood, concrete, steel, or plastic) that provide structural support; any portable or mobile device in which waste is stored or otherwise handled.

**Contaminated Soil:** soil onto which available evidence indicates that a hazardous substance was spilled, spread, disposed, or deposited.

**Pile:** any non-containerized accumulation above the ground surface of solid, non-flowing wastes; includes open dumps. Some types of piles are: **Chemical Waste Pile** - consists primarily of discarded chemical products, by-products, radioactive wastes, or used or unused feedstocks; **Scrap Metal or Junk Pile** - consists primarily of scrap metal or discarded durable goods such as appliances, automobiles, auto parts, or batteries, composed of materials suspected to contain or have contained a hazardous substance; **Tailings Pile** - consists primarily of any combination of overburden from a mining operation and tailings from a mineral mining, beneficiation, or processing operation; **Trash Pile** - consists primarily of paper, garbage, or discarded non-durable goods which are suspected to contain or have contained a hazardous substance.

**Land Treatment:** landfarming or other land treatment method of waste management in which liquid wastes or sludges are spread over land and tilled, or liquids are injected at shallow depths into soils.

**Other:** a source that does not fit any of the description above: examples include contaminated building, ground water plume with no identifiable source, storm drain, dry wall, and injection well.

## Source Evaluation

<b>Source No.:</b>	<b>Source Name:</b> contaminated soil	<b>Source Waste Quantity (WQ) Calculations:</b>
<b>Source Description:</b>  The site consists of approximately 6.34 acres		Contaminated soil from PA Table 1a for Area  Acres / 0.78 $6.34 / 0.78 = 8.13$

<b>Source No.:</b>	<b>Source Name:</b> contaminated groundwater	<b>Source Waste Quantity (WQ) Calculations:</b>
<b>Source Description:</b> One monitoring well has indicated the presence of contaminants at this site. To calculate the volume of the water column, I will use the following formula:  Area of plume X Depth of water column X 10% pore space  Since only one well had hits for VOCs, I will use ½ the site size to estimate the area of the plume. Depth of water column I will use a default of 1 foot since the vertical extent of the contamination has not been defined.		V = Area of plume X Depth of water column X 10% pore space  $((6.34 \text{ acres}/2)(43,560 \text{ ft}^2/\text{acre})) \times 1 \text{ ft} \times 10\% = 13,808.52 \text{ ft}^3$  Volume for "Other" PA table 1a for multiple source = $\text{ft}^3 / 67.5$ $13,808.52 / 67.5 = 204.57$

<b>Source No.:</b>	<b>Source Name:</b>	<b>Source Waste Quantity (WQ) Calculations:</b>
<b>Source Description:</b>		$8.13 + 204.57 = 212.7$ WQ > 100 to 10,000 = WC 32

Site WC: <b>32</b>
-----------------------

## WASTE CHARACTERISTICS (WC) SCORES

WC, based on waste quantity, may be determined by one or all of four measures called "tiers": constituent quantity, wastestream quantity, source volume, and source area. PA Table 1a (page 5) is divided into these four tiers. The amount and detail of information available determine which tier(s) to use for each source. For each source, evaluate waste quantity by as many of the tiers as you have information to support, and select the result that gives you the highest WC score. If minimal, incomplete, or no information is available regarding waste quantity, assign a WC score of 18 (minimum).

PA Table 1a has 6 columns: column 1 indicates the quantity tier., column 2 lists source types for the four tiers; columns 3, 4, and 5 provide ranges of waste amount for sites with only one source, which correspond to WC scores at the top of the columns (18, 32, or 100); column 6 provides formulas to obtain source waste quantity (WQ) values at sites with multiple sources.

### To determine WC for sites with only one source:

1. Identify source type (see descriptions opposite page 4).
2. Examine all waste quantity data available.
3. Estimate the mass and/or dimensions of the source.
4. Determine which quantity tier to use based on available sources of information.
5. Convert source measurement to appropriate units for each tier you can evaluate for the source.
6. Identify the range into which the total quantity falls for each tier evaluated (PA Table 1a).
7. Determine the highest WC score obtained for any tier (18, 32 or 100, at top of PA Table 1a columns 3, 4, and 5 respectively).
8. Use this WC score for all pathways.

### To determine WC for sites with multiple sources:

1. Identify source type (see descriptions opposite page 4).
2. Examine all waste quantity data available.
3. Estimate the mass and/or dimensions of the source.
4. Determine which quantity tier to use based on available sources of information.
5. Convert source measurements to appropriate units for each tier you can evaluate for each source.
6. For each source, use the formula in column 6 of PA Table 1a to determine the WC value for each tier that can be evaluated. The highest WQ value obtained for any tier is the WQ value for the source.
7. Sum the WQ values for all sources to get the site WQ total.
8. Use the site WQ total from step 7 to assign the WC score from PA Table 1b.
9. Use this WC score for all pathways. \*

\*The WC score is considered in all four pathways. However, if a primary target is identified for the ground water, surface water, or air migration pathway, assign the determined WC or a score of 32, whichever is greater, as the WC score for that pathway.



PA TABLE 1: WASTE CHARACTERISTICS (WC) SCORES

PA Table 1a: WC Score for Single Source Sites and Formulas for Multiple Source Sites

T I E R  C O N S T I T U E N T  W A S T E S T R E A M	SOURCE TYPE	SINGLE SOURCE SITES (assign WC Scores )			MULTIPLE SOURCE SITES
		WC = 18	WC = 32	WC = 100	Formula for Assigning Source WQ Values
	N/A	≤100 lb	> 100 to 10,000 lb	>10,000lb	lb + 1
	N/A	≤500,000 lb	>500,000 to 50 million lb	>50 million lb	lb + 5,000
V O L U M E	Landfill	≤6.75 million ft <sup>3</sup> ≤250,000 yd <sup>3</sup>	>6.75 million to 675 million ft <sup>3</sup> >250,000 to 25 million yd <sup>3</sup>	>675 million ft <sup>3</sup> >25 million yd <sup>3</sup>	ft <sup>3</sup> + 67,500 yd <sup>3</sup> + 2,500
	Surface Impoundment	≤6,750 ft <sup>3</sup> ≤250 yd <sup>3</sup>	>6,750 to 675,000 ft <sup>3</sup> >250 to 25,000 yd <sup>3</sup>	>675,000 ft <sup>3</sup> >25,000 yd <sup>3</sup>	ft <sup>3</sup> + 67.5 yd <sup>3</sup> + 2.5
	Drums	≤ 1,000 drums	>1,000 to 100,000 drums	>100,000 drums	drums + 10
	Tanks and non-drum containers	≤50,000 gallons	>50,000 to 5 million gallons	>5 million gallons	gallons + 500
	Contaminated Soil	≤6.75 million ft <sup>3</sup> ≤250,000 yd <sup>3</sup>	>6.75 million to 675 million ft <sup>3</sup> >250,000 to 25 million yd <sup>3</sup>	>675 million ft <sup>3</sup> >25 million yd <sup>3</sup>	ft <sup>3</sup> + 67,500 yd <sup>3</sup> + 2,500
	Pile	≤6,750 ft <sup>3</sup> ≤250 yd <sup>3</sup>	>6,750 to 675,000 ft <sup>3</sup> >250 to 25,000 yd <sup>3</sup>	>675,000 ft <sup>3</sup> >25,000 yd <sup>3</sup>	ft <sup>3</sup> + 67.5 yd <sup>3</sup> + 2.5
	Other	≤6,750 ft <sup>3</sup> ≤250 yd <sup>3</sup>	>6,750 to 675,000 ft <sup>3</sup> >250 to 25,000 yd <sup>3</sup>	>675,000 ft <sup>3</sup> >25,000 yd <sup>3</sup>	ft <sup>3</sup> + 67.5 yd <sup>3</sup> + 2.5
A R E A	Landfill	≤340,000 ft <sup>2</sup> ≤7.8 acres	>340,000 ft <sup>2</sup> to 34 million ft <sup>2</sup> >7.8 to 780 acres	>34 million ft <sup>2</sup> >780 acres	ft <sup>2</sup> + 3,400 acres + 0.078
	Surface Impoundment	≤1,300 ft <sup>2</sup> ≤0.029 acres	>1,300 to 130,000 ft <sup>2</sup> >0.029 to 2.9 acres	>130,000 ft <sup>2</sup> >2.9 acres	ft <sup>2</sup> + 13 acres + 0.00029
	Contaminated Soil	≤3.4 million ft <sup>2</sup> ≤78 acres	>3.4 million to 340 million ft <sup>2</sup> >78 to 7,800 acres	>340 million ft <sup>2</sup> >7,800 acres	ft <sup>2</sup> + 34,000 acres + 0.78
	Pile*	≤1,300 ft <sup>2</sup> ≤0.029 acres	>1,300 to 130,000 ft <sup>2</sup> >0.029 to 2.9 acres	>130,000 ft <sup>2</sup> >2.9 acres	ft <sup>2</sup> + 13 acres + 0.00029
	Land Treatment	≤27,000 ft <sup>2</sup> ≤0.62 acres	>27,000 to 2.7 million ft <sup>2</sup> >0.62 to 62 acres	>2.7 million ft <sup>2</sup> >62 acres	ft <sup>2</sup> + 270 acres + 0.0062

1 ton = 2,000 lb = 1 yd<sup>3</sup> = 4 drums = 200 gallons

\* Use area of land surface under pile not surface area of pile

PA Table 1b: WC Scores for Multiple Source Sites

WQ Total	WC Score
> 0 to 100	18
> 100 to 10,000	32
>10,000	100

## GROUND WATER PATHWAY

**Ground Water Use Description:** Provide information on ground water use in the vicinity. Present the general stratigraphy, aquifers used, and distribution of private and municipal wells.

**Calculations for Drinking Water Populations Served by Ground Water:** Provide populations from private wells and municipal supply systems in each distance category. Show apportionment calculations for blended supply systems.

The Site is situated in central Etowah County in what is considered to be the Coosa Valley District of the Alabama Valley and Ridge physiographic section. The topography of Etowah County is controlled by the geology and is characterized by narrow linear ridges and wide valleys. The surface elevations of the valley floor in the Coosa Valley District typically range from 500 to 600 feet above mean sea level (MSL). The surface elevation at the sites is approximately 520 feet MSL. The Soil Conservation Service (SCS) classifies soils at the site as Holston – Urban Land complex, 2 to 15 percent slopes. The soils in this classification are described by the SCS as areas of gently sloping to moderately steep, well drained Holston soils and areas of urban land. Holston soils make-up 40 to 60 percent of this map unit and consist of yellowish-brown fine sandy loam, loam, or sandy clay loam; yellowish-brown silty clay loam; and mottled yellowish-brown to strong brown and red silty clay loam. The permeability of the Holston soils is moderate with the permeability of the unsaturated zone at  $4.2 \times 10^{-4}$  to  $1.4 \times 10^{-3}$  cm/sec. Urban land make-up 20 to 40 percent of this map unit and consist of areas that have been altered to an extent that identification is not possible. It includes areas covered by buildings, sidewalks, streets, and areas disturbed by grading, cutting, and filling. Geologic units in Etowah County are sedimentary in origin and range in age from Cambrian to Pennsylvanian. Quaternary alluvial deposits of the ancestral Coosa River also occur in Etowah County. The northwestern portion of the county is within the Appalachian Plateau physiographic province, and consists of broad synclinal mountains separated by folded and faulted anticlinal valleys. The southeastern portion of the county is within the Valley and Ridge physiographic province, and consists of a series of folded overlapping imbricate thrust sheets. The site is located within the outcrop area of the Quaternary age alluvial and low terrace deposits. The alluvial and low terrace deposits range in thickness from 0 to 70 feet in Etowah County, and are composed of medium to coarse grained gravel with a sandy matrix and a fine to medium grained sand with interbedded lens of gravel and clay. The alluvial deposits in central Etowah County overlie the Conasauga Formation, which is composed of thin bedded, dark-gray, fine-grained limestone interbedded with thin fissile shale. The Gadsden Fault traverses approximately 0.75 miles to the north of the site. The Gadsden Fault is a thrust fault and generally trends from the west to the east. The structural features in the vicinity of the site should enhance the fractured nature of the bedrock. The site is located in an area that is susceptible to karst formation. The site is located within the recharge area for the Watercourse aquifer, and in the outcrop area of the Quaternary alluvial and low terrace deposits. Groundwater in this formation occurs under unconfined conditions and typically yields small quantities to wells. The Watercourse aquifer is hydraulically interconnected with the underlying Conasauga Formation. Groundwater in this formation occurs in interconnected solution channels, and potentially large amounts of water can be obtained from these features. Depth to groundwater at the site is expected to be between less than 25 feet. There are no active public water supply wells located within 4 miles of the site. The closest active public water supply well is operated by Glencoe Water Works Board, and is located approximately 5.5 miles to the southeast of the site. The site is not in a designated wellhead protection area, and no wellhead protection areas are located within four miles of the site. Due to the urban nature of the site private water supply wells are not expected in the immediate vicinity of the site.

## **GROUND WATER PATHWAY GROUND WATER USE DESCRIPTION**

### **Describe Ground Water Use Within 4-miles of the Site:**

(Describe stratigraphy, information on aquifers, municipal and/or private wells)

The Site is situated in central Etowah County in what is considered to be the Coosa Valley District of the Alabama Valley and Ridge physiographic section. The topography of Etowah County is controlled by the geology and is characterized by narrow linear ridges and wide valleys. The surface elevations of the valley floor in the Coosa Valley District typically range from 500 to 600 feet above mean sea level (MSL). The surface elevation at the sites is approximately 520 feet MSL. The Soil Conservation Service (SCS) classifies soils at the site as Holston – Urban Land complex, 2 to 15 percent slopes. The soils in this classification are described by the SCS as areas of gently sloping to moderately steep, well drained Holston soils and areas of urban land. Holston soils make-up 40 to 60 percent of this map unit and consist of yellowish-brown fine sandy loam, loam, or sandy clay loam; yellowish-brown silty clay loam; and mottled yellowish-brown to strong brown and red silty clay loam. The permeability of the Holston soils is moderate with the permeability of the unsaturated zone at  $4.2 \times 10^{-4}$  to  $1.4 \times 10^{-3}$  cm/sec. Urban land make-up 20 to 40 percent of this map unit and consist of areas that have been altered to an extent that identification is not possible. It includes areas covered by buildings, sidewalks, streets, and areas disturbed by grading, cutting, and filling. Geologic units in Etowah County are sedimentary in origin and range in age from Cambrian to Pennsylvanian. Quaternary alluvial deposits of the ancestral Coosa River also occur in Etowah County. The northwestern portion of the county is within the Appalachian Plateau physiographic province, and consists of broad synclinal mountains separated by folded and faulted anticlinal valleys. The southeastern portion of the county is within the Valley and Ridge physiographic province, and consists of a series of folded overlapping imbricate thrust sheets. The site is located within the outcrop area of the Quaternary age alluvial and low terrace deposits. The alluvial and low terrace deposits range in thickness from 0 to 70 feet in Etowah County, and are composed of medium to coarse grained gravel with a sandy matrix and a fine to medium grained sand with interbedded lens of gravel and clay. The alluvial deposits in central Etowah County overlie the Conasauga Formation, which is composed of thin bedded, dark-gray, fine-grained limestone interbedded with thin fissile shale. The Gadsden Fault traverses approximately 0.75 miles to the north of the site. The Gadsden Fault is a thrust fault and generally trends from the west to the east. The structural features in the vicinity of the site should enhance the fractured nature of the bedrock. The site is located in an area that is susceptible to karst formation. The site is located within the recharge area for the Watercourse aquifer, and in the outcrop area of the Quaternary alluvial and low terrace deposits. Groundwater in this formation occurs under unconfined conditions and typically yields small quantities to wells. The Watercourse aquifer is hydraulically interconnected with the underlying Conasauga Formation. Groundwater in this formation occurs in interconnected solution channels, and potentially large amounts of water can be obtained from these features. Depth to groundwater at the site is expected to be between less than 25 feet.

### **Calculations for Drinking Water Populations Served by Ground Water:**

There are no active public water supply wells located within 4 miles of the site. The closest active public water supply well is operated by Glencoe Water Works Board, and is located approximately 5.5 miles to the southeast of the site. The site is not in a designated wellhead protection area, and no wellhead protection areas are located within four miles of the site. Due to the urban nature of the site private water supply wells are not expected in the immediate vicinity of the site.

## **GROUND WATER PATHWAY CRITERIA LIST**

This "Criteria List" helps guide the process of developing hypotheses concerning the occurrence of a suspected release and the exposure of specific targets to a hazardous substance. The check-boxes record your professional judgment in evaluating these factors. Answers to all of the listed questions may not be available during the PA. Also the list is not all-inclusive: if other criteria help shape your hypotheses, list them at the bottom of the page or attach an additional page.

The "Suspected Release" section identifies several site, source, and pathway conditions that could provide insight as to whether a release from the site is likely to have occurred. If a release is suspected, use the "Primary Targets" section to evaluate conditions that may help identify targets likely to be exposed to a hazardous substance. Record responses for the well that you feel has the highest probability of being exposed to a hazardous substance. You may use this section of the chart more than once, depending on the number of targets you feel may be considered "primary."

Check the boxes to indicate a "yes," "no," or "unknown" answer to each question. If you check the "Suspected Release" box as "Yes," make sure you assign a Likelihood of Release value of 550 for the pathway.

**GROUNDWATER PATHWAY CRITERIA LIST**

<i>SUSPECTED RELEASE</i>	<i>PRIMARY TARGETS</i>
<p>Y N U e o n s k</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Are sources poorly contained?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Is the source a type likely to contribute to groundwater contamination (e.g., wet lagoon)?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Is waste quantity particularly large?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is precipitation heavy?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the infiltration rate high?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Is the site located in an area of karst terrain?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the subsurface highly permeable or conductive?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is the drinking water drawn from a shallow aquifer?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Are suspected contaminants highly mobile in groundwater?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Does analytical or circumstantial evidence suggest groundwater contamination?</p> <p><input type="checkbox"/> <input type="checkbox"/> Other criteria?</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/> <b>SUSPECTED RELEASE?</b></p>	<p>Y N U e o n s k</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is any drinking water well nearby?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Has any nearby drinking water well been closed?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Has any nearby drinking water user reported foul-tasting or foul-smelling water?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does any nearby well have a large drawdown or high production rate?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Is any drinking water well located between the site and other wells that are suspected to be exposed to a hazardous substance?</p> <p><input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> Does analytical or circumstantial evidence suggest contamination at a drinking water well?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Does any drinking water well warrant sampling?</p> <p><input type="checkbox"/> <input type="checkbox"/> Other criteria?</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/> <b>PRIMARY TARGET(S) IDENTIFIED?</b></p>
<p>Summarize the rationale for Suspected Release (attach an additional page if necessary):</p> <p><b>Monitoring well analysis indicates the presence of TCE and Tetrachloroethene in MW #2. Trace amounts of Barium also show up in MW #2 and MW #3.</b></p>	<p>Summarize the rationale for Primary Targets (attach an additional page if necessary):</p> <p><b>Municipal water supplies are taken from surface water intakes for the Gadsden area. The closest municipal well is located over 5 miles from the site.</b></p>

## GROUND WATER PATHWAY SCORESHEET

### Pathway Characteristics

Answer the questions at the top of the page. Refer to the Ground Water Pathway Criteria List (page 7) to hypothesize whether you suspect that a hazardous substance associated with the site has been released to ground water. Record depth to aquifer (in feet): the difference between the deepest occurrence of a hazardous substance and the depth of the top of the shallowest aquifer at (or as near as possible) to the site. Note whether the site is in karst terrain (characterized by abrupt ridges, sink holes, caverns, springs, disappearing streams). Record the distance (in feet) from any source to the nearest well used for drinking water.

### Likelihood of Release (LR)

1. **Suspected Release:** Hypothesize based on professional judgment guided by the Ground Water Pathway Criteria List (page 7). If you suspect a release to ground water, use only Column A for this pathway and do not evaluate factor 2.

2. **No Suspected Release:** If you do not suspect a release, determine score based on depth to aquifer or whether the site is in an area of karst terrain. If you do not suspect a release to ground water, use only Column B to score this pathway.

### Targets (T)

This factor category evaluates the threat to populations obtaining drinking water from ground water. To apportion populations served by blended drinking water Supply systems, determine the percentage of population served by each well based on its production.

3. **Primary Target Population:** Evaluate populations served by all drinking water wells that you suspect have been exposed to a hazardous substance released from the site. Use professional judgment guided by the Ground Water Pathway Criteria List (page 7) to make this determination. In the space provided enter the population served by any wells you suspect have been exposed to a hazardous substance from the site. If only the number of residences is known, use the average county residents per household (rounded up to the next integer) to determine population served. Multiply the population by 10 to determine the Primary Target Population score. Note that if you do not suspect a release, there can be no primary target population.

4. **Secondary Target Population:** Evaluate populations served by all drinking water wells within 4 miles that you do not suspect have been exposed to a hazardous substance. Use PA Table 2a or 2b (for wells drawing from non-karst and karst aquifers, respectfully) (page 9). If only the number of residences is known, use the average county residents per household (rounded to the nearest integer) to determine population served. Circle the assigned value for the population in each distance category and enter it in the column on the far-right side of the table. Sum the far-right column and enter the total as the Secondary Target Population factor score.

5. Nearest Well represents the threat posed to the drinking water well that is most likely to be exposed to a hazardous substance. If you have identified a primary target population, enter 50. Otherwise, assign the score from PA Table 2a or 2b for the closest distance category with a drinking water well population.

6. **Wellhead Protection Area (WHPA):** WHPAs are special areas designated by States for protection under Section 1428 of the Safe Drinking Water Act. Local/State and EPA Regional water officials can provide information regarding the location of WHPAs.

7. **Resources:** A score of 5 can generally be assigned as a default measure. Assign zero only if ground water within 4 miles has no resource use.

Sum the target scores in Column A (Suspected Release) or Column B (No Suspected Release).

### Waste Characteristics (WC)

8. Waste Characteristics: Score is assigned from page 4. However, if you have identified any primary target for ground water, assign either the score calculated on page 4 or a score of 32, whichever is greater.

**Ground Water Pathway Score.** Multiply the scores for LR, T, and WC. Divide the product by 82,500. Round the result to the nearest integer. If the result is greater than 100, assign 100.

# GROUNDWATER PATHWAY SCORESHEET

## Pathway Characteristics

Do you suspect a release (see Groundwater Pathway Criteria List, page 7)?  
 Is the site located in karst terrain?  
 Depth to aquifer:  
 Distance to the nearest drinking water well:

☒ Yes ☐ No  
☒ Yes ☐ No  
 20 - 50 ft  
 > 5 miles ft

## LIKELIHOOD OF RELEASE

- SUSPECTED RELEASE** If you suspect a release to groundwater (see page 7), assign a score of 550. Use only Column A for this pathway
- NO SUSPECTED RELEASE** If you do not suspect a release to groundwater, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Use only column B for this pathway

LR =

A	B
Suspected Release (550)	No Suspected Release (340 or 500)
550	
550	

Reference

## TARGETS

- PRIMARY TARGET POPULATION:** Determine the number of people served by drinking water wells that you suspect have been exposed to a hazardous substance from the site (see Groundwater Pathway Criteria List, page 7)  
 \_\_\_\_\_ people X 10 =
- SECONDARY TARGET POPULATION:** Determine the number of people served by drinking water wells that you do NOT suspect have been exposed to a hazardous substance from the site, and assign the total population score from PA Table 2.  
 Are any wells part of a blended system? ☐ Yes ☐ No  
 If yes, attach a page to show apportionment calculations
- NEAREST WELL:** If you have identified a primary target population for groundwater, assign a score of 50; otherwise, assign the Nearest Well score from PA Table 2. If no drinking water wells exist within 4 miles, assign a score of zero.
- WELLHEAD PROTECTION AREA (WHPA):** If any source lies within or above a WHPA, or if you have identified any primary target well within a WHPA, assign a score of 20; assign 5 if neither condition holds but a WHPA is present within 4 miles; otherwise assign zero
- Resources**

T =

0	
0	
(50, 20, 18, 9, 5, 3, 2, or 0)	(20, 18, 9, 5, 3, 2, or 0)
0	
(20, 5, or 0)	(20, 5, or 0)
0	
(5 or 0)	(5 or 0)
5	
5	

## WASTE CHARACTERISTICS

- A.** If you have identified any primary target for groundwater, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor
- B.** If you have NOT identified any primary target for groundwater, assign the waste characteristics score calculated on page 4.

WC =

(100 or 32)	
(100, 32, or 15)	(100, 32, or 15)
32	
32	

GROUNDWATER PATHWAY SCORE:

LR x T x WC  
 82,500

(Subject to a maximum of 100)

1.07

**PA TABLE 2: VALUES FOR SECONDARY GROUNDWATER TARGET POPULATION**

**PA Table 2a: Non-Karst Aquifers**

Distance from Site	Population	Nearest Well (choose highest)	Population Served by Wells Within Distance Category										Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	Greater than 100,000	
0 to 1/4 mile	_____	20	1	2	5	16	52	163	521	1,633	5,214	16,325	_____
>1/4 to 1/2 mile	_____	18	1	1	3	10	32	101	323	1,012	3,233	10,121	_____
>1/2 to 1 mile	_____	9	1	1	2	5	17	52	167	522	1,668	5,224	_____
> 1 to 2 miles	_____	5	1	1	1	3	9	29	94	294	939	2,938	_____
>2 to 3 miles	_____	3	1	1	1	2	7	21	68	212	678	2,122	_____
>3 to 4 miles	_____	2	1	1	1	1	4	13	42	131	417	1,306	_____
Nearest Well =			Score =										

**PA Table 2b: Karst Aquifers**

Distance from Site	Population	Nearest Well (choose highest)	Population Served by Wells Within Distance Category										Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	Greater than 100,000	
0 to 1/4 mile	_____	20	1	2	5	16	52	163	521	1,633	5,214	16,325	_____
>1/4 to 1/2 mile	_____	20	1	1	3	10	32	101	323	1,012	3,233	10,121	_____
>1/2 to 1 mile	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
> 1 to 2 miles	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
>2 to 3 miles	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
>3 to 4 miles	_____	20	1	1	3	8	26	82	261	816	2,607	8,162	_____
Nearest Well =			Score =										0

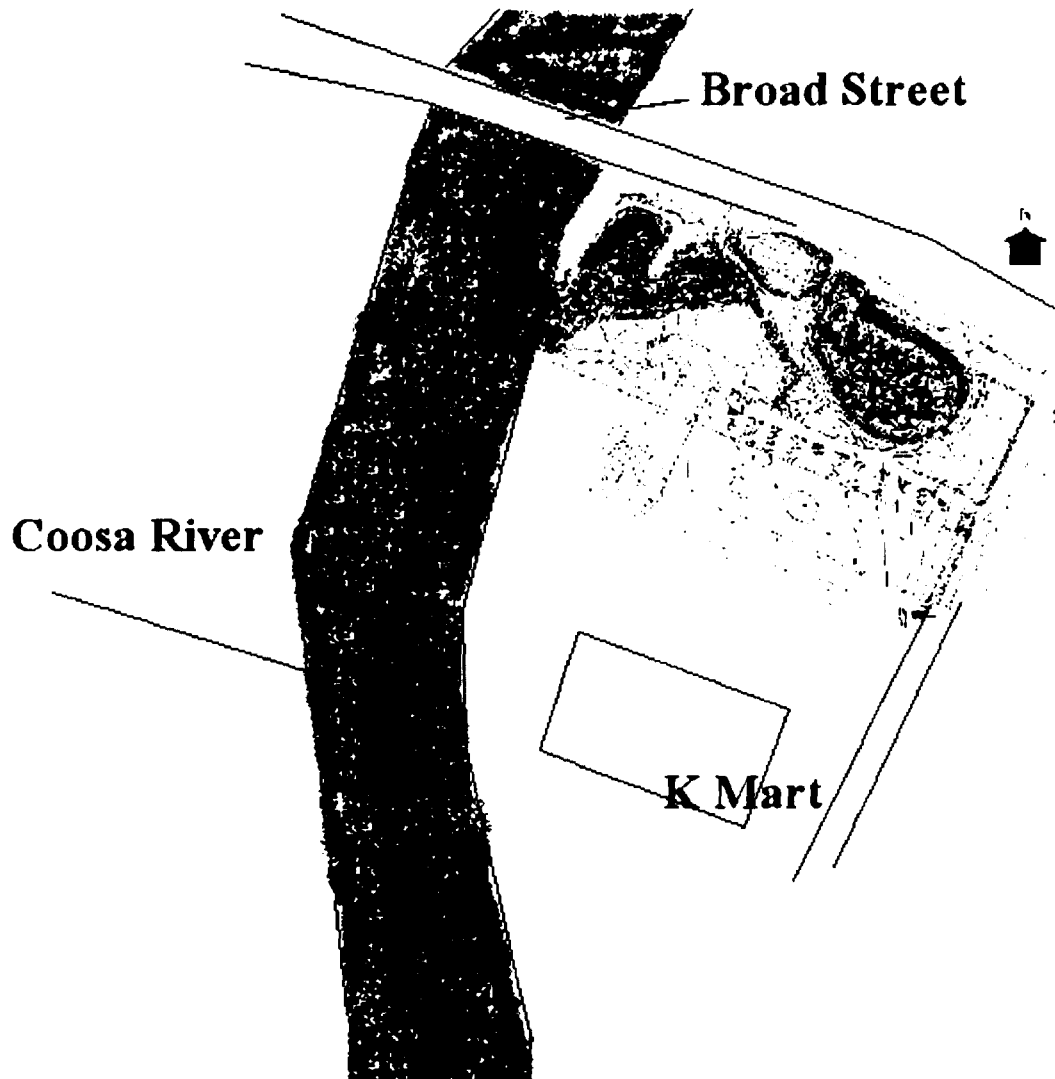
A - 17



## **SURFACE WATER PATHWAY**

**Migration Route Sketch:** Sketch the surface water migration pathway (freehand is acceptable illustrating the drainage route and identifying water bodies, probable point of entry, flows, and targets).

Drainage from the site is to the Coosa River to the west. The 15 mile surface water pathway consists entirely of the Coosa River.

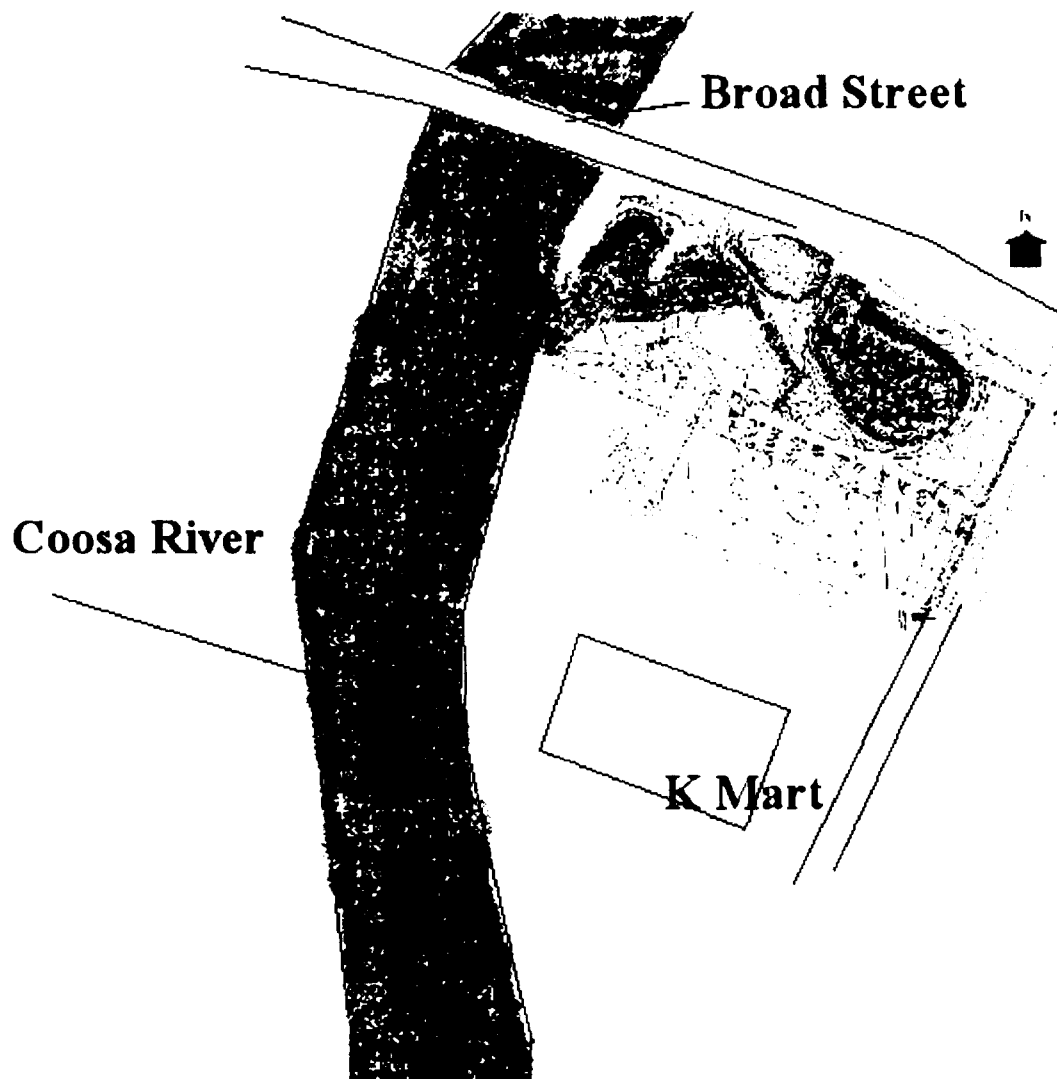


## **SURFACE WATER PATHWAY MIGRATION ROUTE SKETCH**

### **Surface Water Migration Route Sketch:**

(include runoff routes, probable point of entry, 15-mile target distance limit, intakes, fisheries, and sensitive environments)

Drainage from the site is to the Coosa River to the west. The 15 mile surface water pathway consists entirely of the Coosa River flowing south. The Coosa River is the nearest fishery.



## **SURFACE WATER PATHWAY CRITERIA LIST**

This "Criteria List" helps guide the process of developing hypotheses concerning the occurrence of a suspected release and the exposure of specific targets to a hazardous substance. The check-boxes record your professional judgment in evaluating these factors. Answers to all of the listed questions may not be available during the PA. Also, the list is not all-inclusive; if other criteria help shape your hypotheses, list them at the bottom of the page or attach an additional page.

The "Suspected Release" section identifies several site, source, and pathway conditions that could provide insight as to whether a release from the site is likely to have occurred. If a release is suspected, use the "Primary Targets" section to guide you through evaluation of some conditions that may help identify targets likely to be exposed to a hazardous substance. Record responses for the target that you feel has the highest probability of being exposed to a hazardous substance. You may use this section of the chart more than once, depending on the number of targets you feel may be considered "primary."

Check the boxes to indicate a "yes," "no," or "unknown" answer to each question. If you check the "Suspected Release" box as "yes," make sure you assign a Likelihood of Release value of 550 for the Pathway.

If the distance to surface water is greater than 2 miles, do not evaluate the surface water migration Pathway. Document the source of information in the text boxes below the surface water criteria list.

# **SURFACE WATER PATHWAY CRITERIA LIST**

## **SUSPECTED RELEASE**

## **PRIMARY TARGETS**

Y    U  
e   N   n  
s   o   k

- ☒ ☐ ☐ Is surface water nearby?
- ☐ ☐ ☒ Is waste quantity particularly large?
- ☐ ☐ ☒ Is the drainage area large?
- ☒ ☐ ☐ Is rainfall heavy?
- ☐ ☒ ☐ Is the infiltration rate low?
- ☐ ☐ ☒ Are sources poorly contained or prone to runoff or flooding?
- ☐ ☒ ☐ Is a runoff route well defined (e.g., ditch or channel leading to surface water)?
- ☐ ☒ ☐ Is vegetation stressed along the probable runoff route?
- ☐ ☒ ☐ Are sediments or water unnaturally discolored?
- ☐ ☒ ☐ Is wildlife unnaturally absent?
- ☐ ☒ ☐ Has deposition of wastes into surface water been observed?
- ☐ ☐ ☒ Is groundwater discharge to surface water likely?
- ☐ ☒ ☐ Does analytical or circumstantial evidence suggest surface water contamination?
- ☐ ☒ ☐ Other criteria? \_\_\_\_\_
- ☒ ☐ ☐ **SUSPECTED RELEASE?**

Y    U  
e   N   n  
s   o   k

- ☒ ☐ ☐ Is any target nearby? If yes:
  - ☐ Drinking water intake
  - ☒ Fishery
  - ☒ Sensitive environment
- ☐ ☒ ☐ Has any intake, fishery, or recreation area been closed?
- ☐ ☒ ☐ Does analytical or circumstantial evidence suggest surface water contamination at or downstream of a target?
- ☒ ☐ ☐ Does any target warrant sampling? If yes:
  - ☐ Drinking water intake
  - ☒ Fishery
  - ☒ Sensitive environment
- ☐ ☒ Other criteria? \_\_\_\_\_
- ☐ ☒ **PRIMARY INTAKE(S) IDENTIFIED?**
- ☐ ☒ **PRIMARY FISHERY(IES) IDENTIFIED?**
- ☐ ☒ **PRIMARY SENSITIVE ENVIRONMENT(S) IDENTIFIED?**

Summarize the rationale for Suspected Release (attach an additional page if necessary):

**Using the worst case scenario and without either sediment samples or surface water samples to disprove a release to surface water, a suspected release is hypothesized.**

Summarize the rationale for Primary Targets (attach an additional page if necessary):

## **SURFACE WATER PATHWAY LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT SCORESHEET**

### **Pathway Characteristics**

The surface water pathway includes three threats: Drinking Water Threat, Human Food Chain Threat, and Environmental Threat. Answer the questions at the top of the page. Refer to the Surface Water Pathway Criteria List (Page 11) to hypothesize whether you suspect that a hazardous substance associated with the site has been released to surface water. Record the distance to surface water (the shortest overland drainage distance from a source to a surface water body). Record the flood frequency at the site (e.g., 100-yr, 200-yr). If the site is located in more than one floodplain use the most frequent flooding event. Identify surface water use(s) along the surface water migration path and their distance(s) from the site.

### **Likelihood of release (LR)**

1. **Suspected Release:** Hypothesize based on professional judgement guided by the Surface Water Pathway Criteria List (page 11). If you suspect a release to surface water, use only Column A for this pathway and do not evaluate factor 2.
2. **No Suspected Release:** If you do not suspect a release, determine score based on the shortest overland drainage distance from a source to a surface water body. If distance to surface water is 2,500 feet or less, assign a score of 500. If distance to surface water is greater than 2,500 feet, determine score based on flood frequency. If you do not suspect a release to surface water, use only Column B to score this pathway.

### **Drinking Water Threat Targets (T)**

3. List all drinking water intakes on downstream surface water bodies along the surface water migration path. Record the intake name, the type of water body on which the intake is located, the flow of the water body, and the number of people served by the intake (apportion the population if part of a blended system).
  4. **Primary Target Population:** Evaluate populations served by all drinking water intakes that you suspect have been exposed to a hazardous substance released from the site. Use professional judgment guided by the Surface Water Pathway Criteria List (page 11) to make this determination. In the space provided, enter the population served by all intakes you suspect have been exposed to a hazardous substance from the site. If only the number of residences is known, use the average county residents per household (rounded up to the next integer) to determine population served. Multiply by 10 to determine the Primary Target Population score. Remember, if you do not suspect a release, there can be no primary target population.
  5. **Secondary Target Population:** Evaluate populations served by all drinking water intakes within the target distance limit that you do not suspect have been exposed to a hazardous substance. Use PA Table 3 (page 13) and enter the population served by intakes for each flow category. If only the number of residences is known, use the average county residents per household (rounded to the nearest integer) to determine population served. Circle the assigned value for the population in each flow category and enter it in the column on the far-right side of the table. Sum the far-right column and enter the total as the Secondary Target Population factor score.
- Gauging station data for many surface water bodies are available from USGS or other sources. In the absence of gauging station data, estimate flow using the list of surface water body types and associated flow categories in PA Table 4 (page 13). The flow for lakes is determined by the sum of flows of streams entering or leaving the lake. Note that the flow category "mixing zone of quiet flowing rivers" is limited to 3 miles from the probable point of entry.
6. **Nearest Intake** represents the threat posed to the drinking water intake that is most likely to be exposed to a hazardous substance. If you have identified a primary target population, enter 50. Otherwise, assign the score from PA Table 3 (page 13) for the lowest-flowing water body on which there is an intake.
  7. **Resources:** A score of 5 can generally be assigned as a default measure. Assign zero only if surface water within the target distance limit has no resource use.

Sum the target scores in Column A (Suspected Release) or Column B (No Suspected Release).

## SURFACE WATER PATHWAY

## LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT SCORESHEET

### Pathway Characteristics

Do you suspect a release (see Surface Water Pathway Criteria List, page 11) Yes ☒ No ☐

Distance to surface water: onsite ft

Flood frequency: \_\_\_\_\_ yrs

What is the downstream distance to the nearest drinking water intake? > 15 miles

Nearest fishery? \_\_\_\_\_ miles      Nearest sensitive environment? onsite miles

		A	B	Refs												
LIKELIHOOD OF RELEASE		Suspected Release	No Suspected Release													
1. SUPECTED RELEASE: If you suspect a release to surface water (see page 11), assign a score of 550. Use only column A for this pathway		550														
2. NO SUSPECTED RELEASE: If you do not suspect a release to surface water, use the table below to assing a score based on distance to surface water and flood frequency. Use only column B for this pathway.			(500, 400, 300, or 100)													
<table><tr><td>Distance to surface water &lt; 2,500 feet</td><td>500</td></tr><tr><td>Distance to surface water &gt; 2,500 feet</td><td></td></tr><tr><td>Site in annual or 10-year floodplain</td><td>500</td></tr><tr><td>Site in 100-year floodplain</td><td>400</td></tr><tr><td>Site in 500-year floodplain</td><td>300</td></tr><tr><td>Site outside 500-year floodplain</td><td>100</td></tr></table>		Distance to surface water < 2,500 feet	500	Distance to surface water > 2,500 feet		Site in annual or 10-year floodplain	500	Site in 100-year floodplain	400	Site in 500-year floodplain	300	Site outside 500-year floodplain	100			
Distance to surface water < 2,500 feet	500															
Distance to surface water > 2,500 feet																
Site in annual or 10-year floodplain	500															
Site in 100-year floodplain	400															
Site in 500-year floodplain	300															
Site outside 500-year floodplain	100															
LR =		550	(500, 400, 300, or 100)													

## DRINKING WATER THREAT TARGETS

3. Record the water body type, flow (if applicable), and number of people served by each drinking water intake within the target distance limit. If there is no drinking water intake within the target distance limit, factors 4, 5, and 6 each receive zero scores.																		
<table border="1"> <thead> <tr> <th>Intake Name</th> <th>Water Body Type</th> <th>Flow</th> <th>People served</th> </tr> </thead> <tbody> <tr> <td>none</td> <td></td> <td>cfs</td> <td></td> </tr> <tr> <td></td> <td></td> <td>cfs</td> <td></td> </tr> <tr> <td></td> <td></td> <td>cfs</td> <td></td> </tr> </tbody> </table>	Intake Name	Water Body Type	Flow	People served	none		cfs				cfs				cfs			
Intake Name	Water Body Type	Flow	People served															
none		cfs																
		cfs																
		cfs																
4. PRIMARY TARGET POPULATION: If you suspect any drinking water intake listed above has been exposed to a hazardous substance from the site (see Surface Water Pathway Criteria List, page 11), list the intake name(s) and calculate the factor score based on the total population served.																		
_____ people X 10 =	0																	
5. SECONDARY TARGET POPULATION: Determine the number of people served by drinking water intakes that you do not suspect have been exposed to a hazardous substance from the site, and assign the total population score from PA Table 3.																		
Are any intakes part of a blended system? ____yes____ no If yes, attach a page to show apportionment calculations.	0																	
	(50, 20, 2, 1, or 0)	(20, 2, 1, or 0)																
6. NEAREST INTAKE: If you have identified a primary target population for the drinking water threat (factor 4), assign a score of 50; otherwise, assign the Nearest Intake score from PA Table 3. In no drinking water intake exists within the target distance limit, assign a score of zero.	0																	
	5 or 0	5 or 0																
7. Resources	5																	
T=	5																	

**PA TABLE 3: VALUES FOR SECONDARY SURFACE WATER TARGET POPULATIONS**

Surface Water Body Flow (see PA Table 4)	Population	Nearest Intake (choose) highest)	Population Served by Intakes Within Flow Category												Population Value
			1 to 30	31 to 100	101 to 300	300 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	Greater than 1,000,000		
< 10 cfs		20	2	5	16	52	163	521	1,633	5,214	16,325	52,136	163,246		
10 to 100 cfs		2	1	1	2	5	16	52	163	521	1,633	5,214	16,325		
>100 to 1,000 cfs		1	0	0	1	1	2	5	16	52	163	521	1,633		
>1,000 to 10,000 cfs		0	0	0	0	0	1	1	2	5	16	52	163		
>10,000 cfs or Great Lakes		0	0	0	0	0	0	0	1	1	2	5	16		
3-mile Mixing Zone		10	1	3	8	26	82	261	816	2,607	8,162	26,068	81,663		
Nearest intake =			Score =												

**PA TABLE 4: SURFACE WATER TYPE / FLOW CHARACTERISTICS WITH DILUTION WEIGHS FOR SECONDARY SURFACE WATER SENSITIVE ENVIRONMENTS**

Type of Surface Water Body		Dilution Weight
Water Body Type	or Flow	
minimal stream	< 10 cfs	1
small to moderate stream	10 to 100 cfs	0.1
moderate to large stream	>100 to 1,000 cfs	N/A
large stream to river	>1,000 to 10,000 cfs	N/A
large river	>10,000 cfs	N/A
3-mile mixing zone of quiet flowing streams or rivers		N/A
coastal tidal waters (harbors, sounds, bays, etc.), ocean or Great Lakes		N/A

## **SURFACE WATER PATHWAY HUMAN FOOD CHAIN THREAT SCORESHEET**

### **Likelihood of Release (LR)**

LR is the same for all surface water pathway threats. Enter LR score from page 12.

### **Human Food Chain Threat Targets (T)**

8. The only human food chain targets are fisheries. A fishery is an area of a surface water body from which food chain organisms are taken or could be taken for human consumption on a subsistence, sporting, or commercial basis. Food chain organisms include fish, shellfish, crustaceans, amphibians, and amphibious reptiles. Fisheries are delineated by changes in surface water body type (i.e., streams and rivers, lakes, coastal tidal waters, and oceans/Great Lakes) and whenever the flow characteristics of a stream or river change.

In the space provided, identify all fisheries within the target distance limit. Indicate the surface water body type and flow for each fishery. Gauging station flow data are available for many surface water bodies from USGS or other sources. In the absence of gauging station data, estimate flow using the list of surface water body types and associated flow categories in PA Table 4 (page 13). The flow for lakes is determined by the sum of flows of streams entering or leaving the lake. Note that, if there are no fisheries within the target distance limit, the Human Food-Chain Threat Targets score is zero.

9. Primary fisheries are any fisheries within the target distance limit that you suspect have been exposed to a hazardous substance released from the site. Use professional judgment guided by the Surface Water Pathway Criteria List (page 11) to make this determination. If you identify any primary fisheries, list them in the space provided, enter 300 as the Primary Fisheries factor score, and do not evaluate Secondary Fisheries. Note that if you do not suspect a release, there can be no primary fisheries.

10. Secondary fisheries are fisheries that you do not suspect have been exposed to a hazardous substance. Evaluate this factor only if fisheries are present within the target distance limit, but none is considered a primary fishery.

- A. If you suspect a release to surface water and have identified a secondary fishery but no primary fishery, assign a score of 210.
- B. If you do not suspect a release, evaluate this factor based on flow. In the absence of gauging station flow data, estimate flow using the list of surface water body types and associated flow categories in PA Table 4 (page 13). Assign a Secondary Fisheries score from the table on the scoresheet using the lowest flow at any fishery within the target distance limit. (Dilution weight multiplier does not apply to PA evaluation of this factor.)

Sum the target scores in Column A (Suspected Release) or Column B (No Suspected Release).



# **SURFACE WATER PATHWAY (continued)** **HUMAN FOOD CHAIN THREAT SCORESHEET**

## **LIKELIHOOD OF RELEASE**

Enter Surface Water Likelihood of Release score from page 12	LR =	<b>A</b>	<b>B</b>	Refs
		Suspected Release (550)	No Suspected Release (500, 500, 300, or 100)	
		<b>550</b>		

## **HUMAN FOOD CHAIN THREAT TARGETS**

8. Record the water body type and flow (if applicable) for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a Target score of 0 at the bottom of the page.

<i>Fishery name</i>	<i>Water Body Type</i>	<i>Flow</i>
<b>Coosa River</b>	<b>large stream to river</b>	<b>&gt;1000 cfs</b>
		<b>to 10,000 cfs</b>
		cfs
		cfs
		cfs
		cfs

9. PRIMARY FISHERIES: If you suspect any fishery listed above has been exposed to a hazardous substance from the site (see Surface Water Criteria List, page 11) assign a score of 300 and do not evaluate Factor 10. List the primary fisheries;

_____	_____
_____	_____

## 10. SECONDARY FISHERIES

A. If you suspect a release to surface water and have identified a secondary fishery but no primary fishery, assign a score of 210.

B. If you do not suspect a release, assign a Secondary Fisheries score from the table below using the lowest flow at any fishery within the target distance limit.

Lowest Flow	Secondary Fisheries Score
<10 cfs	210
10 to 100 cfs	30
>100 cfs, coastal	
tidal waters, ocean	12
or Great Lakes	

(300)	
(210)	
<b>210</b>	
(210, 30, or 12)	
(300, 210, or 0)	<b>210</b>
(210, 30, 12, or 0)	

T =

## **SURFACE WATER PATHWAY ENVIRONMENTAL THREAT SCORESHEET**

### **Likelihood of Release (LR)**

LR is the same for all surface water pathway threats. Enter LR score from Page 12.

### **Environmental Threat Targets (T)**

11. PA Table 5 (page 16) lists sensitive environments for the Surface Water Pathway Environmental Threat. In the space provided, identify all sensitive environments located within the target distance limit. Indicate On surface water body type and flow at each sensitive environment. Gauging station flow data for many surface water bodies are available from USGS or other sources. In the absence of gauging station data, estimate flow using to first of surface water body types and associated flow categories in PA Table 4 (page 13). The flow for lakes is determined by the sum of flows of streams entering or leaving the lake. Note that if there are no sensitive environments within the target distance limit, the Environmental Threat Targets score is zero.

12. Primary sensitive environments are surface water sensitive environments within the target distance limit that you suspect have been exposed to a hazardous substance released from the site. Use Professional judgment guided by the Surface Water Pathway Criteria List (page 11) to make this determination. If you identify any primary sensitive environments, list them in the space provided, enter 300 as the Primary Sensitive Environments factor score, and do not evaluate Secondary Sensitive Environments. Note that if you do not suspect a release, there can be no primary sensitive environments.

13. Secondary sensitive environments are surface water sensitive environments that you do not suspect have been exposed to a hazardous substance. Evaluate this factor only if surface water sensitive environments are present within the target distance limit, but none is considered a primary sensitive environment. Evaluate secondary sensitive environments based on flow.

- In the table provided, list all secondary sensitive environments on surface water bodies with flow of 100 cfs or less.

1) Use PA Table 4 (page 13) to determine an appropriate dilution weight for each.

2) Use PA Tables 5 and 6 (page 16) to determine the appropriate value for each sensitive environment type and for wetlands frontage.

3) For a sensitive environment that falls into more than one of the categories in PA Table 5, sum the values for each type of release to determine the Environment value (e.g., a wetland with 1.5 miles frontage (value of 50) that is also a critical habitat for a Federally designated endangered species (value of 100) would receive a total value of 150).

4) For each sensitive environment, multiply the dilution weight by the environment type (or length of wetlands) value and record the product in the far-right column.

5) Sum the values in the far-right column and enter the total as the Secondary Sensitive Environments score. Do not evaluate part B of this factor.

- If all secondary sensitive environments are on surface water bodies with flows greater than 100 cfs assign 10 as the Secondary Sensitive Environments score.

Sum the target scores in Column A (Suspected Release) or Column B (No Suspected Release).

# SURFACE WATER PATHWAY (continued) ENVIRONMENTAL THREAT SCORESHEET

		A	B	Refs																								
LIKELIHOOD OF RELEASE		Suspected Release (550)	No Suspected Release (500, 500, 300, or 100)																									
Enter Surface Water Likelihood of Release score from page 12 <span style="float: right;">LR =</span>		<b>550</b>																										
<b>ENVIRONMENTAL THREAT TARGETS</b>																												
<p>11. Record the water body type and flow (if applicable) for each surface water sensitive environments within the target distance limit (see PA Table 4 and 5. If there is no sensitive environment within the target distance limit, assign a Target score of 0 at the bottom of the page.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Environment Name</th> <th style="text-align: left;">Water Body Type</th> <th style="text-align: left;">Flow</th> </tr> </thead> <tbody> <tr> <td><b>Clean Water Act</b></td> <td><b>large stream to</b></td> <td><b>&gt; 1000</b> cfs</td> </tr> <tr> <td></td> <td><b>river</b></td> <td><b>to 10,000</b> cfs</td> </tr> <tr> <td></td> <td></td> <td>cfs</td> </tr> <tr> <td></td> <td></td> <td>cfs</td> </tr> <tr> <td></td> <td></td> <td>cfs</td> </tr> <tr> <td></td> <td></td> <td>cfs</td> </tr> </tbody> </table>		Environment Name	Water Body Type	Flow	<b>Clean Water Act</b>	<b>large stream to</b>	<b>&gt; 1000</b> cfs		<b>river</b>	<b>to 10,000</b> cfs			cfs			cfs			cfs			cfs	(300)					
Environment Name	Water Body Type	Flow																										
<b>Clean Water Act</b>	<b>large stream to</b>	<b>&gt; 1000</b> cfs																										
	<b>river</b>	<b>to 10,000</b> cfs																										
		cfs																										
		cfs																										
		cfs																										
		cfs																										
<p>12. PRIMARY SENSITIVE ENVIRONMENTS: If you suspect any sensitive environment listed above has been exposed to a hazardous substance from the site (see Surface Water Criteria List, page 11) assign a score of 300 and do not evaluate factor 13. List the primary sensitive environments:</p> <p>_____</p> <p>_____</p>																												
<p>13. SECONDARY SENSITIVE ENVIRONMENTS: If sensitive environments are present, but none is a primary sensitive environment, evaluate Secondary Sensitive Environments based on flow.</p> <p>A. For secondary sensitive environments on surface water bodies with flows of 100 cfs or less, assign scores as follows, and do not evaluate part B of this factor:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Flow</th> <th style="text-align: center;">Dilution Weight (PA Table 4)</th> <th style="text-align: center;">Environment Type and Value (PA Tables 5 and 6)</th> <th style="text-align: center;">Total</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">cfs</td> <td style="text-align: center;">x</td> <td style="text-align: center;">=</td> <td></td> </tr> <tr> <td style="text-align: center;">cfs</td> <td style="text-align: center;">x</td> <td style="text-align: center;">=</td> <td></td> </tr> <tr> <td style="text-align: center;">cfs</td> <td style="text-align: center;">x</td> <td style="text-align: center;">=</td> <td></td> </tr> <tr> <td style="text-align: center;">cfs</td> <td style="text-align: center;">x</td> <td style="text-align: center;">=</td> <td></td> </tr> <tr> <td style="text-align: center;">cfs</td> <td style="text-align: center;">x</td> <td style="text-align: center;">=</td> <td></td> </tr> </tbody> </table> <p style="text-align: right;">Sum =</p>		Flow	Dilution Weight (PA Table 4)	Environment Type and Value (PA Tables 5 and 6)	Total	cfs	x	=		cfs	x	=		cfs	x	=		cfs	x	=		cfs	x	=		(10)		
Flow	Dilution Weight (PA Table 4)	Environment Type and Value (PA Tables 5 and 6)	Total																									
cfs	x	=																										
cfs	x	=																										
cfs	x	=																										
cfs	x	=																										
cfs	x	=																										
<p>B. If all secondary sensitive environments are located on surface bodies with flows &gt;100 cfs, assign a score of 10.</p>																												
T =		<b>10</b>																										

**PA TABLE 5: SURFACE WATER AND AIR PATHWAY SENSITIVE ENVIRONMENT VALUES**

<b>Sensitive Environment</b>	<b>Assigned Value</b>
Critical habitat for Federally designated endangered or threatened species Marine Sanctuary National Park Designated Federal Wilderness Area Ecologically important areas identified under the Coastal Zone Wilderness Act Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes) National Monument (air pathway only) National Seashore Recreation Area National Lakeshore Recreation Area	100
Habitat known to be used by Federally designated or proposed endangered or threatened species National Preserve National or State Wildlife Refuge Unit of Coastal Barrier Resources System Federal land designated for the protection of natural ecosystems Administratively Proposed Federal Wilderness Area Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay, or estuary Migratory pathways and feeding areas critical for the maintenance of anadromous fish species in a river system Terrestrial areas utilized for breeding by large or dense aggregations of vertebrate animals (air pathway), or semi-aquatic foragers (surface water pathway) National river reach designated as Recreational	75
Habitat known to be used by State designated endangered or threatened species Habitat known to be used by a species under review as to its Federal endangered or threatened status Coastal Barrier (partially developed) Federally designated Scenic or Wild River	50
State land designated for wildlife or game management State designated Scenic or Wild River State designated Natural Area Particular areas, relatively small in size, importance to maintenance of unique biotic communities	25
State designated areas for protection/maintenance of aquatic life under the Clean Water Act	5
Wetlands	See PA Table 6 (Surface Water Pathway) or PA Table 9 (Air Pathway)

**PA TABLE 6: SURFACE WATER PATHWAY  
WETLANDS FRONTAGE VALUES**

<b>Total Length of Wetlands</b>	<b>Assigned Value</b>
Less than 0.1 mil	0
0.1 to 1 mile	25
Greater than 1 to 2 miles	50
Greater than 2 to 3 miles	75
Greater than 3 to 4 miles	100
Greater than 4 to 8 miles	150
Greater than 8 to 12 miles	250
Greater than 12 to 16 miles	350
Greater than 16 to 20 miles	450
Greater than 20 miles	500

## **SURFACE WATER PATHWAY WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORES**

### **Waste Characteristics (WC)**

14. Waste Characteristics: Score is assigned from page 4. However, if a primary target has been identified for any surface water threat, assign either the score calculated on page 4 or a score of 32, whichever is greater.

### **Surface Water Pathway Threat Scores**

Fill in the matrix with the appropriate scores from the previous pages. To calculate the score for each threat: multiply the scores for LR, T, and WC, divide the product by 82,500; and round the result to the nearest integer. The Drinking Water Threat and Human Food Chain Threat are each subject to a maximum of 100. The Environmental Threat is subject to a maximum of 60. Enter the rounded threat scores in the far-right column.

### **Surface Water Pathway Score**

Sum the individual threat scores to determine the Surface Water Pathway Score. If the sum is greater than 100, assign 100.

**SURFACE WATER PATHWAY (concluded)**  
**WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY**

<b>WASTE CHARACTERISTICS</b>	<b>A</b>	<b>B</b>
	<i>Suspected Release</i>	<i>No Suspected Release</i>
14. A. If you have identified any primary targets for surface water (pages 12, 14, or 15), assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor  B. If you have NOT identified any primary target for surface water, assign the waste characteristics score calculated on page 4.	(100 or 32)	
	(100, 32, or 18) <b>32</b>	(100, 32, or 18)
	<b>32</b>	

WC =

**SURFACE WATER PATHWAY THREAT SCORES**

<b>Threat</b>	<b>Likelihood of Release (LR) Score (from page 12)</b>	<b>Targets (T) Score (pages 12, 14, 15)</b>	<b>Pathway Waste Characteristics (WC) Score (determined above)</b>	<b>Threat Score LxTxWC / 82,500</b>
<b>Drinking Water</b>	<b>550</b>	<b>5</b>	<b>32</b>	(subject to a maximum of 100) <b>1.067</b>
<i>Human Food Chain</i>	<b>550</b>	<b>210</b>	<b>32</b>	(subject to a maximum of 100) <b>44.80</b>
Environmental	<b>550</b>	<b>10</b>	<b>32</b>	(subject to a maximum of 60) <b>2.133</b>

SURFACE WATER PATHWAY SCORE  
 (Drinking Water Threat + Human Food Chain Threat + Environmental Threat)

(subject to a maximum of 100)

**48.0**

## **SOIL EXPOSURE PATHWAY CRITERIA LIST**

Areas of surficial contamination can generally be assumed. This "Criteria List" helps guide the process of developing a hypothesis concerning the exposure of specific targets to a hazardous substance at the site. Use the "Residential Population" section to evaluate site and source conditions that may help identify targets likely to be exposed to a hazardous substance. The check-boxes record your professional judgement. Answers to all of the listed questions may not be available during the PA. Also, the list is not all-inclusive; if other criteria help shape your hypothesis, list them at the bottom of the page or attach an additional page.

Check the boxes to indicate a "yes," "no," or "unknown" answer to each question.

## SOIL EXPOSURE PATHWAY CRITERIA LIST

<b>SUSPECTED CONTAMINATION</b>	<b>RESIDENT POPULATION</b>
Surficial contamination can generally be assumed	<div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <span>Y E S</span> <span>N O</span> <span>U N K</span> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> </div> <div style="width: 70%;"> <p>Is any residence, school, or daycare facility on or within 200 feet of an area of suspected contamination?</p> <p>Is any residence, school or daycare facility located on adjacent land previously owned or leased by the site owner/operator?</p> <p>Is there a migration route that might spread hazardous substances near residences, schools, or daycare facility?</p> <p>Have onsite or adjacent residents or students reported adverse health effects, exclusive of apparent drinking water or air contamination problems?</p> <p>Does any neighboring property warrant sampling?</p> <p>Other Criteria?</p> <p>RESIDENT POPULATION IDENTIFIED?</p> </div> </div>

Summarize the rationale for Resident Population (attach an additional page if necessary):



## SOIL EXPOSURE PATHWAY SCORESHEET

### Pathway Characteristics

Answer the questions at the top of the page. Identify people who may be exposed to a hazardous substance because they work at the facility, or reside or attend school or daycare on or within 200 feet of an area of suspected contamination. If the site is active, estimate the number of full or part-time workers. Note that evaluation of targets is based on current site conditions.

### Likelihood of Exposure (LE)

1. **Suspected Contamination:** Areas of surficial contamination are present at most sites, and a score of 550 can generally be assigned as a default measure. Assign zero, which effectively eliminates the pathway from further consideration, only if there is no surficial contamination; reliable analytical data are generally necessary to make this determination.

### Resident Population Threat Targets (T)

2. **Residential Population** corresponds to "primary targets" for the migration pathways. Use professional judgement guided by the Soil Exposure Pathway Criteria List (page 18) to determine if there are people living or attending school or daycare on or within 200 feet of areas of suspected contamination. Record the number of people identified as resident population and multiply by 10 to determine the Resident Population factor score.

3. **Resident Individual:** Assign 50 if you have identified a resident population; otherwise, assign zero.

4. **Workers:** Estimate the number of full and part-time workers at this facility and adjacent facilities where contamination is also suspected. Assign a score for the Workers factor from the table.

5. **Terrestrial Sensitive Environments:** In the table provided, list each terrestrial sensitive environment located on an area of suspected contamination. Use PA Table 7 (page 20) to assign a value for each. Sum the values and assign the total as the factor score.

6. **Resources:** A score of 5 can generally be assigned as a default measure. Assign zero only if there is no land resource use on an area of suspected contamination.

Sum the target scores.

### Waste Characteristics (WC)

7. Enter the WC score determined on page 4.

**Resident Population Threat Score:** Multiply the scores for LE, T, and WC. Divide the product by 82,500. Round the result to the nearest integer. If the result is greater than 100, assign 100.

**Nearby Population Threat Score:** Do not evaluate this threat if you gave a zero score to Likelihood of Exposure. Otherwise, assign a score based on the population within a 1-mile radius (use the same 1-mile radius population you evaluate for air pathway population targets):

Population Within One Mile	Nearby Population Threat Score
< 10,000	1
10,000 to 50,000	2
> 50,000	4

**Soil Exposure Pathway Score:** Sum the Resident Population Threat score and the Nearby Population Threat score, subject to a maximum of 100.

## SOIL EXPOSURE PATHWAY SCORESHEET

### Pathway Characteristics

Do any people live on or within 200 ft areas of suspected contamination? Yes \_\_\_ No ☒   
 Do any people attend school or daycare on or within 200 ft of areas of suspected contamination? Yes \_\_\_ No ☒   
 Is the facility active? Yes ☒ No \_\_\_ If yes, estimate the number of workers: **10 to 100**

### LIKELIHOOD OF EXPOSURE

1. SUSPECTED CONTAMINATION: Surficial contamination can generally be assumed, and a score of 550 assigned. Assign zero only if the absence of surficial contamination can be confidently demonstrated. LE =

Suspected Contamination  
(550 or 0)

**550**

### RESIDENT POPULATION THREAT TARGETS

2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or daycare on or within 200 feet of areas of suspected contamination (see Soil Exposure Pathway Criteria List, page 18).  
 \_\_\_\_\_ people x 10 =

**0**

(50 or 0)

3. RESIDENT INDIVIDUAL: If you have identified a resident population (factor 2), assign a score of 50; otherwise, assign a score of 0.

**0**

(15, 10, 5, or 0)

4. WORKERS: Use the following table to assign a score based on the total number of workers at the facility and nearby facilities with suspected contamination:

Number of Workers	Score
0	0
1 to 100	5
101 to 1,000	10
> 1,000	15

**5**

5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Use PA Table 7 to assign a value for each terrestrial sensitive environment on an area of suspected contamination:

Terrestrial Sensitive Environment Type	Value

Sum =

**0**

(5 or 0)

6. RESOURCES

T =

**10**

### WASTE CHARACTERISTICS

7. Assign the waste characteristics score calculated on page 4.

WC =

(100, 32, or 18)

**32**

RESIDENT POPULATION THREAT SCORE:

$$\frac{LE \times T \times WC}{82,500}$$

(subject to a maximum of 100)

**2.133**

NEARBY POPULATION THREAT SCORE:

(4, 2, OR 1)

**1.0**

SOIL EXPOUSRE PATHWAY SCORE:

Resident Population Threat + Nearby Population Threat

(subject to a maximum of 100)

**3.133**

**PA TABLE 7: SOIL EXPOSURE PATHWAY  
TERRESTRIAL SENSITIVE ENVIRONMENT VALUES**

<b><i>Terrestrial Sensitive Environment</i></b>	<b><i>Assigned Value</i></b>
Terrestrial critical habitat for Federally designated endangered or threatened species National Park Designated Federal Wilderness Area National Monument	100
Terrestrial habitat known to be used by Federally designated or proposed threatened or endangered species National Preserve (terrestrial) National or State Terrestrial Wildlife Refuge Federal land designated for protection of natural ecosystems Administratively proposed Federal Wilderness Area Terrestrial areas utilized by large or dense aggregations of animals (vertebrate species) for breeding	75
Terrestrial habitat used by State designated endangered or threatened species Terrestrial habitat used by species under review for Federal designated endangered or threatened status	50
State lands designated for wildlife or game management State designated Natural Areas Particular areas, relatively small in size, important to maintenance of unique biotic communities	25

## **Air Pathway Criteria List**

This "Criteria List" helps guide the process of developing a hypothesis as to whether a release to the air is likely to be detected. The check-boxes record your professional judgment. Answers to all of the listed questions may not be available during the PA. Also, the list is not all-inclusive; if other criteria help shape your hypothesis, list them at the bottom of the page or attach an additional page.

The "Suspected Release" section identifies several conditions that could provide insight as to whether a release from the site is likely to be detected. If a release is suspected, primary targets are any residents, workers, students, an sensitive environments on or within  $\frac{1}{4}$  mile of the site.

Check the boxes to indicate a "yes," "no," or "unknown" answer to each question. If you check the "Suspected Release" box as "yes," make sure you assign a Likelihood of Release value of 550 for the pathway.

## AIR PATHWAY CRITERIA LIST

<b>SUSPECTED RELEASE</b>	<b>PRIMARY TARGETS</b>
<div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>Y</span> <span>N</span> <span>U</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>e</span> <span>o</span> <span>n</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 5px;"> <span>s</span> <span></span> <span>k</span> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div>Are odors currently reported?</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div>Has a release of hazardous substances to the air been directly observed</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div>Are there reports of adverse health effects (e.g., headaches, nausea, dizziness) potentially resulting from migration of hazardous substances through the air?</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div>Does analytical or circumstantial evidence suggest a release to the air?</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div>Other Criteria? _____</div> </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div style="width: 30px; text-align: center;"><input type="checkbox"/></div> <div><b>SUSPECTED RELEASE?</b></div> </div>	<p>If you suspect a release to air, evaluate all populations and sensitive environments within 1/4 mile (including those onsite) as primary targets</p>
<p>Summarize the rationale for Suspected Release (attach an additional page if necessary):</p> <div style="height: 400px; border: 1px solid black; margin-top: 5px;"></div>	

## AIR PATHWAY SCORESHEET

### Pathway Characteristics

Answer the questions at the top of the page. Refer to the Air Pathway Criteria List (page 21) to hypothesize whether you suspect that a hazardous substance release to the air could be detected. Due to dispersion, releases to air are not as persistent as releases to water migration pathways and are much more difficult to detect. Develop your hypothesis concerning the release of hazardous substances to air based on "real time" considerations. Record the distance (in feet) from any source to the nearest regularly occupied building.

### Likelihood of Release (LR)

1. **Suspected Release:** Hypothesize based on professional judgment guided by the Air Pathway Criteria List (page 21). If you suspect a release to air, use only Column A for this pathway and do not evaluate factor 2.
2. **No Suspected Release:** If you do not suspect a release, enter 500 and use only Column B for this pathway.

### Targets (T)

3. **Primary Target Population:** Evaluate populations subject to exposure from release of a hazardous substance from the site. If you suspect a release, the resident, student, and worker populations on and within  $\frac{1}{4}$  mile of the site are considered to be primary target population. If only the number of residences is known, use the average county residents per household (rounded up to the next integer) to determine the population. In the space provided, enter this population. Multiply the population by 10 to determine the Primary Target Population score. Note that if you do not suspect a release, there can be no primary target population.

4. **Secondary Target Population:** Evaluate populations in distance categories not suspected to be subject to exposure from release of a hazardous substance from the site. If you suspect a release, residents, students, and workers in the  $\frac{1}{4}$  to 4-mile distance categories are secondary target population. If you do not suspect a release, all residents, students, and workers on site and within 4 miles are considered secondary target population.

Use PA Table 8 (page 23). Enter the population in each secondary target population distance category, circle the assigned value, and record it on the far-right side of the table. Sum the far-right column and enter the total as the Secondary Target Population factor score.

5. **Nearest Individual:** represents the threat posed to the person most likely to be exposed to a hazardous substance release from the site. If you have identified a primary target population, enter 50. Otherwise, assign the score from PA Table 8 (page 23) for the closest distance category in which you have identified a secondary target population.

6. **Primary Sensitive Environments:** if a release is suspected, all sensitive environments on or within  $\frac{1}{4}$  mile of the site are considered primary targets. List them and assign values for sensitive environment type (from PA Table 5, page 16) and/or wetland acreage (from PA Table 9, page 23). Sum the values and enter the total as the factor score.

7. **Secondary Sensitive Environments:** If a release is suspected, sensitive environments in the  $\frac{1}{4}$ - to  $\frac{1}{2}$ -mile distance category are secondary targets; greater distances need not be evaluated because distance weighting greatly diminishes the impact on site score. If you do not suspect a release, all sensitive environments on and within  $\frac{1}{2}$  mile of the site are considered secondary targets. List each secondary sensitive environment on PA Table 10 (page 23) and assign a value to each using PA Tables 5 and 9. Multiply each value by the indicated distance weight and record the product in the far right column. Sum the products and enter the total as the factor score.

8. **Resources:** A score of 5 can generally be assigned as a default measure. Assign zero only if there is no land resource use within  $\frac{1}{2}$  mile.

Sum the target scores in Column A (Suspected Release) or Column B (No Suspected Release).

### Waste Characteristics (WC)

9. **Waste Characteristics:** Score is assigned from page 4. However, if you have identified any primary target for the air pathway, assign either the score calculated on page 4 or a score of 32, whichever is greater.

**Air Pathway Score:** Multiply the scores for LR, T, and WC. Divide the product by 82,500. Round the result to the nearest integer. If the result is greater than 100, assign 100.

## AIR PATHWAY SCORESHEET

<b>Pathway Characteristics</b>	
Do you suspect a release (see Air Pathway Criteria List, page 21)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Distance to the nearest individual:	<b>workers on site<sup>ft</sup></b>

### LIKELIHOOD OF RELEASE

1. **SUSPECTED RELEASE:** If you suspect a release to air (see page 21, assign a score of 550. Use only column A for this pathway
2. **NO SUSPECTED RELEASE:** If you do not suspect a release to air, assign a score of 500. Use only column B for this pathway

LR =

A	B
Suspected Release (550)	No Suspected Release
	(500) <b>500</b>
	<b>500</b>

### TARGETS

3. **PRIMARY TARGET POPULATION:** Determine the number of people subject to exposure from a suspected release of hazardous substances to air.  
\_\_\_\_\_ people x 10 =
4. **SECONDARY TARGET POPULATION:** Determine the number of people not suspected to be exposed to a release to air, and assign the total population score using PA Table 8.
5. **NEAREST INDIVIDUAL:** If you have identified any Primary Target Population for the air pathway, assign a score of 50; otherwise, assign the Nearest Individual score from PA Table 8.
6. **PRIMARY SENSITIVE ENVIRONMENTS:** Sum the sensitive environment values (PA Table 5) and wetland acreage values (PA Table 9) for environments subject to exposure from a suspected release to air.

Sensitive Environment Type	Value

Sum =

7. **SECONDARY SENSITIVE ENVIRONMENTS:** Use PA Table 10 to determine the score for secondary sensitive environments.
8. **RESOURCES**

T =

	<b>34</b>
(50, 20, 7, 2, 1, or 0)	(20, 7, 2, 1, or 0) <b>20</b>
	<b>0</b>
(5 or 0)	(5 or 0) <b>5</b>
	<b>59</b>

### WASTE CHARACTERISTICS

9. A. If you have identified any Primary Target for the air pathway, assign the waste characteristics score calculated on page 4, or a score of 32, whichever is GREATER; do not evaluate part B of this factor.
- B. If you have not identified any Primary Target for the air pathway, assign the waste characteristics score calculated on page 4.

WC =

(100 or 32)	
(100, 32 or 18)	(100, 32 or 18) <b>32</b>
	<b>32</b>

**AIR PATHWAY SCORE:**

$$\frac{LR \times T \times WC}{82,500}$$

(subject to a maximum of 100)

**11.44**

PA TABLE 8: VALUES FOR SECONDARY AIR TARGET POPULATIONS

Distance from Site	Population	Nearest Individual choose Highest	Population Within Distance Category												Population Value
			1 to 10	11 to 30	31 to 100	101 to 300	301 to 1,000	1,001 to 3,000	3,001 to 10,000	10,001 to 30,000	30,001 to 100,000	100,001 to 300,000	300,001 to 1,000,000	Greater than 1,000,000	
onsite	50	20	1	2	5	16	52	163	521	1,633	5,214	16,325	52,136	163,246	5
>0 to 1/4 mile	270	20	1	1	1	4	13	41	130	408	1,303	4,081	13,034	40,811	4
>1/4 to 1/2 mile	794	2	0	0	1	1	3	9	28	88	282	882	2,815	8,815	3
>1/2 to 1 mile	3158	1	0	0	0	1	1	3	8	26	83	261	834	2,612	8
>1 to 2 miles	13906	0	0	0	0	0	1	1	3	8	27	83	266	833	8
>2 to 3 miles	11339	0	0	0	0	0	1	1	1	4	12	38	120	376	4
>3 to 4 miles	11085	0	0	0	0	0	0	1	1	2	7	23	73	229	2
Nearest Individual =		20	Score =												34

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PA TABLE 9: AIR PATHWAY VALUES FOR WETLAND AREAS

Wetland Area	Assigned Value
Less than 1 acre	0
1 to 50 acres	25
Greater than 50 to 100 acres	75
Greater than 100 to 150 acres	125
Greater than 150 to 200 acres	175
Greater than 200 to 300 acres	250
Greater than 300 to 400 acres	350
Greater than 400 to 500 acres	450
Greater than 500 acres	500

PA TABLE 10: DISTANCE WEIGHTS AND CALCULATIONS FOR AIR PATHWAY SECONDARY SENSITIVE ENVIRONMENTS

Distance	Distance Weight	Sensitive Environment Type and Value (from PA Table 5 or 9)	Product
Onsite	0.1	x	
		x	
		x	
0 - 1/4	0.025	x	
		x	
1/4 - 1/2	0.0054	x	
		x	
		x	
Total Environment Score =			



## **SITE SCORE CALCULATION**

In the column labeled S, record the Ground Water Pathway score, the Surface Water Pathway score, the Soil Exposure Pathway score, and the Air Pathway score. Square each pathway score and record the result in the S<sup>2</sup> column. Sum the squared pathway scores. Divide the sum by 4, and take the square root of the result to obtain the Site Score

## **SUMMARY**

Answer the summary questions, which ask for a qualitative evaluation of the relative risk of targets being exposed to a hazardous substance from the site. You may find your responses to these questions a good cross-check against the way you scored the individual pathways. For example, if you scored the ground water pathway on the basis of no suspected release and secondary targets only, yet your response to question # 1 is "yes," this presents apparently conflicting conclusions that you need to reconsider and resolve. Your answers to the questions on page 24 should be consistent with your evaluations elsewhere in the PA scoresheets package.

## SITE SCORE CALCULATION

	S	S <sup>2</sup>
GROUNDWATER PATHWAY SCORE (S <sub>GW</sub> ):	1.07	1.1449
SURFACE WATER PATHWAY SCORE (S <sub>SW</sub> ):	48.00	2304.00
SOIL EXPOSURE PATHWAY SCORE (S <sub>S</sub> ):	3.133	9.8157
AIR PATHWAY SCORE (S <sub>A</sub> ):	11.44	130.874
SITE SCORE:	$\sqrt{\frac{S_{GW}^2 + S_{SW}^2 + S_S^2 + S_A^2}{4}}$	24.73

### SUMMARY

	YES	NO
1. Is there a high possibility of a threat to any nearby drinking water well(s) by migration of a hazardous substance in ground water? A. If yes, identify the well(s). _____ B. If yes, how many people are served by the threatened well(s)? _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Is there a high possibility of a threat to any of the following by hazardous substance migration in surface water? A. Drinking water intake B. Fishery C. Sensitive environment (wetland, critical habitat, others) D. If yes, identify the target(s). _____ _____ _____	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
3. Is there a high possibility of an area of surficial contamination within 200 feet of any residence, school, or daycare facility? If yes, identify the property(ies) and estimate the associated population(s) _____ _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Are there public health concerns at this site that are not addressed by PA scoring considerations? If yes, explain: _____ _____ _____ _____ _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>